

MONTHLY WEATHER REVIEW.

ANNUAL SUMMARY FOR 1893.

VOL. XXI.

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No. 13.

INTRODUCTION.

This annual summary for 1893 is based upon data received from co-operating weather services, and from 1,573 stations occupied by regular and voluntary observers of the Weather Bureau. The statistical data have been prepared by the

Division of Records and Meteorological Data, A. J. Henry, Acting Chief; the text and editorial work by Prof. Cleveland Abbe.

The title page and contents of the REVIEW for 1893 are also published herewith.

GENERAL CLIMATIC CONDITIONS.

CHARTS.

Chart I.—The normal annual pressure as given by the mercurial barometer, reduced to sea level by Prof. H. A. Hazen's tables, but not to standard gravity. The latter reduction, so far as it refers to the variation of gravity with latitude only, can easily be made by using the numerical values given for each degree of latitude on the right-hand side of the chart. The normal pressures are generally for a 20-year period; the resultant wind directions for a 15-year period.

Chart II.—The annual mean pressure for 1893 as given by the mercurial barometer, reduced to sea level but not to standard gravity. The resultant wind directions, as given in Table IV, are shown here by arrows.

Chart III.—The annual mean temperature of the air near the surface of the ground is shown by full lines, and the departures from the normal by broken lines; the lines thus drawn are intended to show the surface or climatological conditions under which animal and vegetable life exist, but for other studies it is more convenient to have isotherms drawn for an ideal sea-level temperature just as for the pressure of the air; the necessary reduction to sea level requires the assumption of a rate of diminution of temperature with altitude for the free atmosphere above the surface of the earth, such a rate may be determined from observations, and is implied in the reduction of the barometer to sea level, but can not be applied to the hypothetical atmosphere below the surface of the earth, except with the understanding that it is purely a conventional arrangement adopted for the purposes of chartography; for this purpose the rate of one-half of a degree centigrade per 100 meters, or its equivalent, 0.274° F. per 100 feet, has been adopted in accordance with the general practice of climatologists; the isotherms thus prepared, and shown by dotted lines, can, therefore, be directly compared with those published by others, especially Hann.

Chart IV.—The maximum temperature of the year, as reported at regular stations of the Weather Bureau and without further reductions.

Chart V.—The minimum temperature of the year as reported.

Chart VI.—The absolute ranges of temperature.

Chart VII.—The total annual precipitation.

The following corrections to the statistical data in the quarto volume for 1891-'92 have been attended to in preparing the charts of normal values:

Page 14, for Southport, "latitude 38.35," read "33.55."

Page 440, for the "normal pressures at Parkersburg, W. Va., and Portland, Oreg.," substitute the following:

PARKERSBURG, W. VA.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual.
29.44 30.15	29.42 30.13	29.36 30.07	29.39 30.08	29.33 30.01	29.34 30.01	29.38 30.05	29.39 30.06	29.44 30.12	29.39 30.09	29.45 30.16	29.48 30.19	29.40 30.09

PORTLAND OREG.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual.
29.91 30.09	29.90 30.08	29.86 30.04	29.87 30.05	29.86 30.03	29.86 30.03	29.87 30.04	29.85 30.02	29.85 30.02	29.89 30.07	29.92 30.10	29.89 30.07	29.88 30.05

THE NORMAL ANNUAL BAROMETRIC PRESSURE.

The normal annual barometric pressure by mercurial barometer, not reduced to standard gravity, is about 30.02 at the southern boundary of the United States, viz, San Diego, Cal., and Corpus Christi, Tex., and increases to 30.09 as we go northward to Oregon, or 30.07 in Missouri, after which it diminishes as we go further northward to 30.03 at the northern limit of Washington and Minnesota. This diminution continues into Alaska and the Canadian Dominion; it also diminishes as we go eastward from Minnesota to New Brunswick and Nova Scotia, where it averages about 29.95. But as we go eastward from Texas the annual mean pressure rises until it becomes about 30.11 on the south Atlantic coast, which is the region of the maximum annual pressure for any portion of the United States. The regions of low pressure in the Northern Hemisphere are central in the North Pacific along the Aleutian Archipelago and in the North Atlantic between Iceland and southern Greenland; the region of highest pressure extends from the south Atlantic States eastward along the thirtieth parallel to the coast of Africa. A depression extends from Yuma, Ariz., southeast over the Gulf of California and the adjacent coast of Mexico, which is to be considered as a northward extension of what is called the tropical belt of low pressure. In the summer months this extends northward to the British possessions, while the whole belt moves northward; in the winter time the entire belt moves southward, and Mexico, like the United States, has a higher average pressure.

During 1893 the distribution of pressure has been such as to be below the normal by from .02 to .05 in the southwest, the interior valleys, and the upper Lake region, but above the normal by .02 or .03 in the extreme northeast and at several Pacific coast stations.

MEAN TEMPERATURE.

The mean annual temperature, not reduced to sea level, was highest in Florida, Arizona, and southern Texas, the maximum being 76.9° at Key West, Fla. The isotherm 60° F. passed from Hatteras, N. C., westward through central Arkansas, Oklahoma, to southern California. The isotherm of 40° passed from central Maine westward over Lake Huron, central Wisconsin, northern Montana, and thence northwestward through Alberta. The lowest annual averages within the United States were St. Vincent, Minn., 29.9°; Moorhead, Minn., 35°; Duluth, Minn., and Sault Ste. Marie, Mich., 37.4°; Bismarck, N. Dak., 38.1°; Havre, Mont., and Marquette, Mich., 39.2°.

DEPARTURES FROM NORMAL TEMPERATURE.

The mean annual temperature was above the normal in the south Atlantic and Gulf States and the eastern Rocky Mountain slope, the maximum excess being 2.2° at Abilene, Tex. Elsewhere temperature was usually below the normal, the maximum deficit being 4.0° at St. Vincent, Minn.; 2.9° at Portland, Me.; 2.4° at Chicago, Ill.; 2.0° at La Crosse, Wis., and Dubuque, Iowa; 2.2° at Oswego, N. Y.

MAXIMUM TEMPERATURES.

The maximum temperatures of the year exceeding 105° F. were as follows: Yuma, Ariz., 111°, June 7 and August 2; Tucson, Ariz., 107°, June 7 and July 1; Red Bluff, Cal., 106°, August 4; Miles City, Mont., 107°, July 25; Dodge City, Kans., 106°, June 23. The lowest maxima, viz, those below 90°, were San Diego, Cal., 88°, May 22 and October 2; Fort Canby, Wash., 82°, August 26; Port Angeles, Wash., 81°, August 31; Tatoosh Island, Wash., 75°, June 4; Eureka, Cal., 69°, June 4; Hatteras, N. C., 88°, July 23; Block Island, R. I., 86°, June 20; Nantucket, Mass., 87°, June 20.

MINIMUM TEMPERATURES.

The lowest temperatures of the year were as follows: The minima below -40° were Havre and Miles City, Mont., -45°, February 1; Helena, Mont., -42°, January 31; St. Vincent, Minn., -42°, February 1; Bismarck, N. Dak., -41°, January 1. The minima that were above 30° F. were Los Angeles, Cal., 31°, March 9; Yuma, Ariz., 32°, February 16 and November 19; Corpus Christi, Tex., 33°, February 8; Jupiter, Fla., 35°, January 14; San Francisco, Cal., 36°, January 24; San Diego, Cal., 38°, January 11 and December 29; Galveston, Tex., 37°, January 16 and December 4; Key West, Fla., 52°, January 14.

RANGES OF TEMPERATURE.

The smallest annual ranges of temperature have been: Key West, Fla., 39°; Eureka, Cal., 40°; San Diego, Cal., 50°; San Francisco, Cal., 54°; Galveston, Tex., 55°. The largest annual ranges have been: Havre, Mont., 148°; Miles City, Mont., 152°; Helena, Mont., 144°; Bismarck, N. Dak., 144°; Moorhead, Minn., 140°; St. Vincent, Minn., 138°; Huron, S. Dak., 135°; Pierre and Rapid City, S. Dak., 129°.

PRECIPITATION.

The greatest annual precipitations were 104 inches at Tatoosh Island, Wash., and 118 at Neah Bay, Wash. The precipitation exceeded 80 inches on the coast of Washington and 40 on the coast of California. It was from 2 to 10 in Nevada, from 10 to 40 in Idaho, and from 5 to 20 in Arizona; on the eastern slope of the Rocky Mountains from 5 to 15, increasing as we go eastward until, in the Mississippi Valley, it ranged from 25 at the northern end to 45 or 50 at the southern. Along the Atlantic coast the maximum precipitation was 71 at Charleston, S. C., but this was apparently an exception, as the reports generally are 60 or less; the precipitation diminished along the coast northeastward to East-

port, Me., which had about 30 inches and southward to Key West, Fla., which had 22.

PRECIPITATION DEPARTURES FROM NORMAL.

The annual precipitation was generally deficient, and largely so in Louisiana, Kansas, the interior of Georgia, and southern Florida. The largest deficit was 31.04, or 51 per cent, at Kittyhawk, N. C., and 10.82, or 52 per cent of the normal, at Dodge City, Kans. The largest excess was 29.29, or nearly 50 per cent, at Astoria, Oreg. The details of the departures will be found in the accompanying table.

WIND MOVEMENT.

In the MONTHLY WEATHER REVIEW for December, 1893, is given a table of resultant winds from observations at 8 a. m. and 8 p. m., daily, with a full explanation of the method adopted in its preparation. The accompanying table (IV) of this summary gives the similar resultant winds and their component directions, from two observations, daily, throughout the year. The second column of Table I gives the prevailing wind direction for each station, which, of course, may differ greatly from the resultant winds.

Two stations are omitted from the table for which the record is incomplete, viz, Valentine, Nebr., and Seattle, Wash. Those stations like Columbia, Mo., that take only one observation a day are also omitted, but the numerals attached to each station are the same as in the December REVIEW.

ACCUMULATED TEMPERATURES AND RAINFALL.

The relation between the climate of any region, the growth of vegetation, and the quality of the crops is commonly understood to depend, primarily, upon the actual temperature, sunshine, and moisture. The accumulated sums of these quantities day by day after the seed is sown hold a close relation to the resulting harvest. On the other hand the seeds that have been raised for many years in succession in the same region have, by a process of acclimatization, attained the property of yielding what may be called a normal crop under normal climatic conditions; hence, the departures of the weather for any year from the normal climate may be assumed to produce corresponding departures of the crop for that year from the normal crop. From this point of view it has become the custom to publish in the successive WEATHER REVIEWS the departures of temperature and rainfall for the respective months as well as the accumulated departures. In order to present a condensed summary of the climatic conditions during the year 1893, the accompanying tables, V and VI, have been prepared, showing all of these accumulated departures. Table V has been constructed in the following manner: For each district the departure from the normal for the month of January is shown in the first column, and is expressed in degrees F. and inches of rainfall, respectively; the departures for the month of February, after being added to those of January, give the accumulated departures for that month, as shown in the second column, and so on until the end of the year, so that the departures given in the column for December represent the sum total of the twelve monthly departures. If we wish to find the mean departure from the beginning up to any month in the year, we divide the accumulated departure for that month by the calendar number of the month. Thus, the average departure in temperature for the whole year for New England is -16.1° divided by 12, or -1.34°, which also represents the departure of the mean annual temperature for New England for 1893 from the adopted normal.

In general, it will be seen that the year has been cold, and, except in the middle and south Atlantic States, has steadily progressed from January to December toward greater deficits of temperature.

Table VI, of accumulated departures of precipitation, has

been compiled in the same manner as above described, except that the last column gives the total annual departure instead of the average. It shows that there has been almost everywhere a deficit of precipitation, and, except in the north Pacific district, a steady movement from month to month toward a greater deficit.

If the individual monthly departures of rainfall are expressed as percentages of the normal monthly precipitation, we obtain the figures given in the text of the REVIEW from month to month, but the actual departures, as here given, present a clearer view of the progress of dry and wet seasons when they continue for long periods.

TABLE I.—Weather Bureau stations.

State and station.	Mean reduced barometer.	Prevailing winds.	Temperature—degrees Fahrenheit.						Precipitation.		
			Mean an- nual.	Departure from nor- mal.	Extremes of 1893.				Total 1893.	Departure from nor- mal.	Percentage of normal.
					Max.	Date of max.	Min.	Date of min.			
Alabama.	Ins.		°	°	°				Ins.	Ins.	
Mobile.....	30.06	n.	67.0	+0.2	96	July 9	22	Jan. 20	63.42	+0.77	101
Montgomery.....	30.07	s.	65.6	+0.2	96	July 25	17	Jan. 20	47.48	-5.42	90
Arizona.											
Tucson.....	29.94	nw.	66.1	-1.1	107	(June 7) July 15	2	Dec. 30	13.12	-0.11	101
Yuma.....	29.89	w.	72.2	-0.1	111	(June 7) Aug. 25	32	(Feb. 16) (Nov. 19)	3.00	-0.14	94
Arkansas.											
Fort Smith.....	30.05	e.	59.9	+0.5	101	Sept. 13	6	(Jan. 19) Jan. 20	44.70	-0.51	99
Little Rock.....	30.05	se.	61.1	-0.5	98	Sept. 15	11	Jan. 20	48.48	-5.73	89
California.											
Eureka.....	30.08	nw.	50.6	.....	69	June 4	29	Feb. 1	43.71	-0.65	98
Fresno.....	30.00	nw.	61.0	.....	109	Aug. 1	28	Feb. 1	9.40	+0.40	104
Keeler.....	29.96	sw.	59.5	-1.3	101	July 18	23	Dec. 28	3.59	-0.19	95
Los Angeles.....	29.99	w.	61.5	+0.1	92	Aug. 10	31	Mar. 9	21.96	+3.58	121
Pt. Reyes Light.....									26.87		
Red Bluff.....	30.02	nw.	60.6	-2.4	106	Aug. 4	27	Feb. 1	24.36	-1.55	92
Sacramento.....	30.01	s.	58.8	-0.8	103	July 31	28	Dec. 30	16.59	-5.27	84
San Diego.....	30.00	w.	60.6	-0.2	88	(May 22) Oct. 25	38	(Jan. 11) (Dec. 29)	10.29	-0.59	94
San Francisco.....	30.05	sw.	54.3	-1.7	90	June 3	36	Jan. 24	17.91	-6.23	76
Colorado.											
Denver.....	29.99	s.	50.9	+1.6	96	July 3	-2	Feb. 2	8.48	-6.19	57
Pueblo.....	29.97	nw.	52.0	.....	101	June 20	-2	Feb. 2	6.84	-4.83	58
Connecticut.											
New Haven.....	30.02	(sw.)	48.0	-1.4	96	June 20	-3	Jan. 18	46.71	-3.51	94
New London.....	30.03	nw.	47.7	-1.8	95	June 20	-4	Jan. 11	41.72	-7.37	85
District of Columbia.											
Washington.....	30.07	nw.	53.7	-1.1	97	July 26	-6	Jan. 18	36.71	-8.35	82
Florida.											
Jacksonville.....	30.09	ne.	60.6	+0.6	100	July 24	24	Jan. 17	58.23	+3.10	105
Jupiter.....	30.07	(se.) (nw.)	74.0	.....	94	July 26	35	Jan. 14	60.88	+2.87	105
Key West.....	30.07	e.	76.9	-0.3	91	(July 24) (Aug. 16)	52	Jan. 14	22.00	-18.01	55
Pennsylvania.											
Pennscoola.....	30.06	sw.	67.9	+0.2	97	July 25	23	Jan. 20	44.93	-17.20	75
Tampa.....	30.09	ne.	72.2	.....	95	July 25	29	Jan. 17	48.96	-6.15	89
Titusville.....	30.09	se.	71.1	.....	96	July 20	29	Jan. 14	47.80	-6.15	89
Georgia.											
Atlanta.....	30.10	nw.	60.7	-0.3	96	July 27	8	Jan. 16	36.43	-18.03	67
Augusta.....	30.11	nw.	63.8	-0.2	98	July 17	12	Jan. 16	48.91	+0.52	102
Savannah.....	30.10	s.	66.7	+0.1	100	July 15	18	Jan. 16	61.58	+9.88	119
Illinois.											
Cairo.....	30.06	s.	57.1	-0.7	94	July 28	0	Jan. 15	48.79	+5.09	112
Chicago.....	30.00	ne.	46.1	-2.4	95	(Aug. 10) (Sept. 14)	-16	Jan. 15	27.47	-8.08	78
Springfield.....	30.03	nw.	50.9	-1.5	98	Sept. 14	-12	Jan. 15	34.73	-4.36	89
Indiana.											
Indianapolis.....	30.04	nw.	52.0	-0.7	97	July 24	-15	Jan. 15	39.35	-5.47	91
Iowa.											
Davenport.....	30.00	w.	47.3	-1.9	96	Sept. 7	-15	Jan. 13	27.33	-7.54	79
Des Moines.....	30.01	nw.	46.7	-1.6	95	Sept. 6	-10	Feb. 4	25.64	-9.42	73
Dubuque.....	30.00	nw.	45.7	-2.0	96	July 24	-23	Jan. 17	30.77	-6.88	83
Keokuk.....	30.01	nw.	49.9	-1.6	97	Sept. 6	-12	Feb. 4	27.94	-8.08	78
Sioux City.....	29.99	nw.	45.6	.....	97	July 12	-21	Feb. 1	23.05	.....	.....
Kansas.											
Concordia.....	30.02	s.	53.0	+1.7	103	July 14	-11	Feb. 1	21.50	-4.27	79
Dodge City.....	29.98	se.	54.6	+1.6	100	June 23	-7	Feb. 1	10.12	-10.82	48
Topeka.....	30.01	s.	53.9	.....	104	Sept. 13	-6	Feb. 1	32.73	-4.40	88
Wichita.....	30.01	s.	50.1	.....	104	Sept. 13	-2	Feb. 1	18.19	-12.95	58
Kentucky.											
Lexington.....	30.00	sw.	54.4	.....	95	July 25	-11	Jan. 15	42.55	-4.60	90
Louisville.....	30.07	sw.	56.0	-0.8	97	July 24	-10	Jan. 15	43.93	-3.26	94
Louisiana.											
New Orleans.....	30.07	ne.	69.4	+0.4	95	Sept. 16	29	Jan. 20	48.02	-13.76	78
Shreveport.....	30.03	se.	65.8	+0.4	101	July 31	25	Dec. 4	32.06	-18.74	63
Maine.											
Eastport.....	29.93	sw.	41.0	-0.2	90	Aug. 10	-11	Dec. 14	29.87	-19.11	62
Portland.....	29.98	nw.	43.2	-2.9	93	July 21	-9	Dec. 14	43.61	+0.93	102
Maryland.											
Baltimore.....	30.06	nw.	53.5	-1.8	98	June 20	1	Jan. 16	32.15	-12.63	72
Massachusetts.											
Boston.....	30.02	w.	47.9	-0.4	94	June 20	-4	Jan. 11	41.84	-4.26	91
Nantucket.....	30.02	nw.	47.4	-0.9	87	June 20	-4	Jan. 11	35.76	-6.24	85
Vineyard Haven.....	.....	sw.	50.0	.....	90	June 20	2	Jan. 11	44.44	+3.40	108
Woods Hole.....	.....	sw.	47.5	-1.5	82	Aug. 9	-5	Jan. 17	52.10	+7.23	116
Michigan.											
Alpena.....	29.98	nw.	41.3	+0.5	93	July 25	-14	Feb. 20	33.35	-3.08	92
Detroit.....	30.00	sw.	46.9	-1.2	93	July 25	-10	Jan. 15	34.18	+1.58	105

TABLE I.—Weather Bureau stations—Continued.

State and station.	Mean reduced barometer.	Prevailing winds.	Temperature—degrees Fahrenheit.						Precipitation.			
			Mean an- nual.	Departure from nor- mal.	Max.	Extremes of 1893.			Total 1893.	Departure from nor- mal.	Percentage of normal.	
						Date of max.	Min.	Date of min.				
<i>Michigan—Cont'd.</i>	<i>Ins.</i>		°	°	°		°			<i>Ins.</i>	<i>Ins.</i>	
Escanaba.....	29.99	sw.	38.4	-1.7	87	July 15	-21	Feb. 8	26.26	-5.55	83	
Grand Haven.....	29.99	nw.	44.8	-1.5	89	Aug. 10	-2	Feb. 20	34.97	-1.76	98	
Manistee.....	29.94	nw.	39.2	-1.4	95	June 19	-19	Feb. 2	35.86	+3.10	110	
Marquette.....	30.03	sw.	44.9	+0.1	92	(July 12)	-11	Jan. 11	34.80	+2.64	108	
Port Huron.....	29.95	se.	37.4	.....	92	June 20	-26	Jan. 10	39.64	.....	.....
Sault Ste. Marie.....	29.97	nw.	37.4	-1.8	93	July 21	-28	Feb. 1	23.34	-8.73	73	
<i>Minnesota.</i>												
Duluth.....	30.00	(nw.)	35.0	-1.8	101	June 12	-39	Feb. 1	23.58	-0.79	97	
Moorhead.....	30.00	se.	41.3	-1.3	98	July 24	-26	Feb. 1	25.95	-1.36	95	
St. Paul.....	30.00	n.	29.9	-4.0	96	(June 13)	-42	Feb. 1	20.07	+1.90	110	
St. Vincent.....	30.06	ne.	63.4	.....	97	July 28	14	Jan. 20	56.32	.....	.....
<i>Mississippi.</i>												
Meridian.....	30.08	sw.	65.3	-0.2	96	July 27	20	Jan. 20	47.42	-9.72	83	
Vicksburg.....	30.04	nw.	53.6	.....	104	Sept. 14	-6	Feb. 7	42.63	.....	.....
<i>Missouri.</i>												
Columbia.....	30.03	se.	52.9	.....	101	Sept. 13	-8	Feb. 7	32.13	.....	.....
Kansas City.....	30.03	s.	55.3	-0.3	99	Sept. 14	-2	Jan. 15	39.33	+1.33	104	
St. Louis.....	30.05	se.	55.1	.....	102	Sept. 14	-1	Feb. 7	40.55	-5.16	86
Springfield.....	30.05	sw.	39.2	-1.6	103	Aug. 5	-45	Feb. 1	13.31	-1.64	90	
<i>Montana.</i>												
Butte.....	30.02	sw.	42.2	-1.1	102	July 20	-42	Jan. 31	15.48	+2.26	116	
Helena.....	29.94	nw.	42.8	.....	107	July 25	-45	Feb. 1	14.16	.....	.....
Miles City.....	29.94	nw.	42.8	.....	107	July 25	-45	Feb. 1	14.16	.....	.....
<i>Nebraska.</i>												
Kearney.....	30.01	nw.	49.0	.....	99	July 12	-18	Feb. 1	22.86	.....	.....
North Platte.....	30.02	nw.	47.9	+0.3	96	(June 11)	-16	Feb. 7	13.16	-5.90	69	
Omaha.....	30.03	nw.	48.8	-0.7	97	(Sept. 3)	-16	Feb. 7	26.66	-6.38	81	
<i>Nevada.</i>												
Carson City.....	30.06	.....	49.1	.....	93	July 19	8	(Nov. 18)	12.10	-0.84	94
Winnemucca.....	30.05	sw.	46.6	-2.9	98	Aug. 14	-19	Feb. 1	7.85	-1.07	88	
<i>New Jersey.</i>												
Atlantic City.....	30.05	sw.	50.9	-0.9	93	July 13	-4	Jan. 16	37.13	-5.68	87	
New Brunswick.....	30.02	nw.	50.2	.....	98	June 20	-10	Jan. 18	49.31	.....	.....
<i>New Mexico.</i>												
Santa Fe.....	30.01	sw.	49.4	+1.3	89	July 4	5	Dec. 30	14.94	+1.25	102	
<i>New York.</i>												
Albany.....	30.03	s.	47.0	-1.1	96	June 20	-6	Feb. 5	35.39	-3.40	91	
Buffalo.....	30.00	sw.	45.8	-0.5	90	Aug. 9	-5	Jan. 10	38.64	+0.33	101	
New York.....	30.04	nw.	51.3	-0.1	96	June 20	1	Jan. 11	53.01	+7.54	117	
Oswego.....	30.01	se.	44.3	-2.2	92	Aug. 11	-6	Jan. 11	34.78	-0.50	99	
Rochester.....	30.03	sw.	46.5	-0.1	97	Aug. 11	-6	Jan. 11	35.50	+0.32	101	
<i>North Carolina.</i>												
Charlotte.....	30.07	sw.	59.4	-0.6	100	July 15	5	Jan. 16	56.33	+2.66	105	
Hatteras.....	30.08	n.	60.8	-0.4	88	July 23	16	Jan. 11	58.30	-10.62	84	
Kittyhawk.....	30.05	sw.	58.9	-0.6	95	June 16	9	Jan. 11	29.52	-31.04	49	
Raleigh.....	30.08	sw.	58.7	-0.8	100	July 7	2	Jan. 17	49.52	-6.18	95	
Southport.....	30.07	sw.	62.2	-1.1	92	Sept. 20	11	Jan. 14	54.02	+4.52	109	
Wilmington.....	30.09	sw.	63.3	+0.2	97	July 8	13	Jan. 16	42.75	-13.49	76	
<i>North Dakota.</i>												
Bismarck.....	29.95	nw.	38.1	-1.5	103	Aug. 7	-41	Feb. 1	13.74	-5.22	72	
Williston*.....	29.98	sw.	37.1	-2.3	105	July 20	-46	Feb. 1	15.45	+1.49	111	
<i>Ohio.</i>												
Cincinnati.....	30.05	se.	53.7	-1.6	95	July 30	-11	Jan. 15	44.00	+2.82	107	
Cleveland.....	30.02	se.	48.1	-0.7	94	July 15	-6	Jan. 15	33.88	-3.36	90	
Columbus.....	30.02	nw.	51.2	-0.8	95	July 14	-12	Jan. 15	38.12	-2.16	94	
Sandusky.....	30.02	e.	48.9	-1.0	94	July 25	-9	Jan. 15	29.00	-6.40	82	
Toledo.....	30.02	nw.	48.3	-1.5	93	July 13	-10	Jan. 15	23.81	-8.07	75	
<i>Oklahoma.</i>												
Oklahoma.....	30.03	se.	59.1	.....	101	Sept. 13	-2	Jan. 19	24.28	.....	.....
<i>Oregon.</i>												
Astoria.....	30.01	sw.	49.9	0.0	85	June 5	16	Jan. 31	91.68	+29.29	14	
Baker City.....	30.01	se.	43.8	.....	100	July 31	-17	Feb. 1	15.83	.....	.....
Portland.....	30.07	sw.	50.1	-2.4	94	Aug. 31	8	Feb. 1	39.03	-10.20	79	
Roseburg.....	30.06	nw.	50.9	-1.9	96	July 31	20	Feb. 1	37.86	+2.58	107	
<i>Pennsylvania.</i>												
Erie.....	30.01	sw.	47.4	-1.4	90	July 15	-5	Jan. 14	39.99	-2.41	96	
Harrisburg.....	30.07	w.	50.4	.....	96	June 20	-4	Jan. 16	35.18	-14.64	89
Philadelphia.....	30.05	nw.	52.9	-0.4	98	June 20	0	Jan. 16	37.65	-3.03	93	
Pittsburg.....	30.05	nw.	51.6	-0.6	95	July 25	-3	Jan. 16	37.84	-0.40	99	
<i>Rhode Island.</i>												
Block Island.....	30.03	nw.	47.7	-1.4	86	June 20	2	Jan. 1	44.84	+0.48	101	
Narragansett Pier.....	.....	sw.	46.8	-1.4	92	June 20	-4	Jan. 11	46.22	-3.05	94
<i>South Carolina.</i>												
Charleston.....	30.07	sw.	66.1	+0.3	99	July 14	20	Jan. 16	70.99	+14.69	126	
Columbia.....	.....	w.	63.8	.....	102	July 14	11	Jan. 16	41.67	.....	.....
<i>South Dakota.</i>												
Huron.....	29.99	se.	41.5	-0.1	102	(July 24)	-33	Feb. 1	16.94	-4.80	78	
Rapid City.....	29.97	w.	45.6	+1.4	103	(Sept. 16)	-26	Feb. 1	9.61	-8.33	58	
Pierre.....	29.99	nw.	45.1	.....	103	June 11	-26	Feb. 1	14.56	.....	.....
Yankton.....	30.00	nw.	45.6	+0.5	98	(Sept. 3)	-22	Feb. 1	23.32	-3.66	87	
<i>Tennessee.</i>												
Chattanooga.....	30.10	se.	60.0	+0.2	98	July 25	5	Jan. 16	47.46	-9.36	83	
Knoxville.....	30.08	ne.	58.8	+0.5	94	July 25	-10	Jan. 16	43.42	-9.45	82	
Memphis.....	30.08	s.	61.3	-0.2	97	July 28	13	Jan. 20	44.45	-9.53	83	
Nashville.....	30.06	nw.	58.7	-0.6	96	July 28	3	Jan. 15	46.30	-5.71	91	
<i>Texas.</i>												
Abilene.....	30.01	s.	65.3	+2.2	104	Sept. 12	10	Feb. 2	16.27	-8.01	67	
Amarillo.....	30.00	s.	56.1	.....	102	June 23	4	Feb. 2	17.22	.....	.....
Corpus Christi.....	30.02	se.	70.8	.....	95	Sept. 9	33	Feb. 8	20.50	-11.23	65
El Paso.....	30.00	nw.	63.8	+0.5	104	June 29	18	Jan. 13	10.88	+0.35	103	
Galveston.....	30.06	se.	70.3	+0.4	92	Sept. 9	37	(Jan. 16)	35.43	-15.55	69	
<i>Palestine.</i>												
Palestine.....	30.04	s.	66.5	+1.8	100	(July 31)	22	Jan. 19	30.58	-15.78	65	
San Antonio.....	30.04	se.	70.1	+1.8	103	(Sept. 12)	26	Jan. 19	18.24	-13.89	60	

TABLE I.—Weather Bureau stations—Continued.

State and station.	Mean reduced barometer.	Prevailing winds.	Temperature—degrees Fahrenheit.					Precipitation.		
			Mean annual.	Departure from normal.	Extremes for 1893.			Total 1893.	Departure from normal.	Percentage of normal.
					Max.	Date of max.	Min.	Date of min.		
<i>Utah.</i>	<i>Inch.</i>	<i>se.</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>Inch.</i>	<i>Inch.</i>	<i>106</i>
Salt Lake City.....	30.05	se.	50.2	-1.4	99	July 19	4	Jan. 20	17.35	+0.98
<i>Vermont.</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>85</i>
Northfield.....	30.03	s.	39.5	.....	91	Aug. 10	-27	Dec. 14	31.36	-5.54
<i>Virginia.</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>96</i>
Cape Henry.....	30.08	sw.	58.5	-0.1	99	July 26	6	Jan. 17	50.77	-2.25
Lynchburg.....	30.07	sw.	55.9	-1.1	97	July 25	-6	Jan. 17	54.60	+11.65
Norfolk.....	30.07	ne.	58.5	-0.6	95	July 16	6	Jan. 17	57.90	-5.70
<i>West Virginia.</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>98</i>
Parkersburg.....	30.08	sw.	53.0	.....	96	July 25	-11	Jan. 11	44.22	-0.98
<i>Washington.</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>120</i>
Fort Canby.....	30.02	n.	48.7	-1.7	82	Aug. 26	16	Jan. 31	75.40	+16.74
Neah Bay.....	30.01	sw.	48.3	.....	77	June 4	5	Feb. 2	118.88	+17.01
Olympia.....	30.03	s.	48.1	-1.6	94	Aug. 31	6	Jan. 31	61.62	+10.23
Port Angeles.....	30.01	sw.	45.6	-0.4	81	Aug. 31	-1	Jan. 31	36.40	+7.44
<i>Spokane.</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>110</i>
Spokane.....	30.03	s.	45.7	-2.0	99	July 31	-19	Jan. 31	22.00	+3.89
<i>Tatoosh Island.</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>117</i>
Tatoosh Island.....	30.01	e.	47.0	-1.7	75	June 4	7	Jan. 31	104.19	+17.44
<i>Walla Walla.</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>130</i>
Walla Walla.....	30.05	s.	50.6	-2.8	103	July 31	-15	Feb. 1	23.07	+6.49
<i>Wisconsin.</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>100</i>
Green Bay.....	30.01	s.	41.9	-0.3	96	July 13	-22	Jan. 14	32.99	-0.01
<i>La Crosse.</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>77</i>
La Crosse.....	30.01	s.	44.2	-2.0	96	July 24	-26	Jan. 14	24.64	-7.40
<i>Milwaukee.</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>102</i>
Milwaukee.....	30.00	nw.	43.8	-1.1	94	Aug. 10	-16	Feb. 4	32.87	+0.38
<i>Wyoming.</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>76</i>
Cheyenne.....	29.99	nw.	45.3	+0.9	91	June 11	-4	Feb. 2	9.22	-2.91
Lander.....	30.01	sw.	42.2	.....	95	July 20	-19	Feb. 28	10.89	.....

* Eight days missing from November report.

TABLE II.—Voluntary stations.

State and station.	Mean for 1893.	Temperature—degrees Fahrenheit.				Precipitation.
		Extremes for 1893.				
		Max.	Month.	Min.	Month.	
<i>Alabama.</i>						
Aleco.....	66.1	97	July	20	Jan.	.....
Bermuda.....	64.5	96	July	18	Jan.	.....
Brewton.....	65.6	102	July	18	Jan.	60.87
Citronelle.....	67.3	94	June	22	Jan.	53.30
Claiborne Landing.....	.....	.....	.....	.....	.....	44.97
Cordova.....	.....	.....	.....	.....	.....	48.76
Decatur.....	.....	96	July	.....	.....	45.76
Elba.....	65.3	.....	.....	.....	.....	53.99
Eufaula.....	66.9	100	Aug.	.....	.....	49.08
Florence a.....	.....	.....	.....	.....	.....	46.02
Florence b.....	60.3	97	July	- 6	Jan.	50.82
Gadsden.....	.....	.....	.....	.....	.....	50.53
Geneva.....	68.2	102	July	22	Dec.	46.22
Greensboro.....	63.5	98	July	13	Jan.	52.91
Healing Springs.....	63.2	98	July	19	Jan.	72.18
Highland Home.....	64.9	96	July	16	Jan.	57.03
Livingston b.....	.....	100	July	.....	.....	59.67
Lynn a.....	.....	.....	.....	.....	.....	53.55
Maple Grove.....	62.5	102	July	.....	.....	46.72
Marion.....	.....	100	July	.....	.....	46.86
Mount Willing.....	65.8	99	July	18	Jan.	49.70
Newbern.....	63.7	96	July	12	Jan.	48.46
Newburg.....	60.9	103	July	- 8	Jan.	49.08
Oxanna.....	61.2	.....	.....	5	Jan.	52.52
Selma.....	.....	.....	.....	.....	.....	38.97
Stardevant.....	.....	.....	.....	.....	.....	52.79
Talladega.....	.....	.....	.....	.....	.....	50.00
Tallapoosa.....	.....	.....	.....	.....	.....	44.77
Tuscaloosa.....	59.5	99	July	.....	.....	47.68
Tuscumbia a.....	.....	.....	.....	.....	.....	54.59
Tuscumbia b.....	.....	.....	.....	.....	.....	47.68
Union Springs a.....	64.8	101	July	13	Jan.	51.97
Uniontown.....	65.4	98	July	13	Jan.	51.97
Valley Head.....	57.6	95	July	- 6	Jan.	42.87
Warrior.....	.....	.....	.....	.....	.....	48.36
Willsonville.....	.....	.....	.....	.....	.....	45.37
<i>Alaska.</i>						
Killiknoo.....	39.9	80	July	-10	Feb.	72.00
Metlakatla.....	42.9	80	July	0	Jan.	102.94
<i>Arizona.</i>						
Antelope Valley.....	73.1	111	June	31	Jan.	15.17
Arizona Canal Company's Dam.....	66.9	105	June	23	Dec.	9.53
Benson.....	60.6	99	June	24	Feb.	7.71
Bisbee.....	69.5	118	June	.....	.....	14.79
Buckeye.....	61.8	106	June	16	Dec.	10.26
Calabasas.....	.....	.....	.....	.....	.....	10.42
Casa Grande.....	72.5	111	July	26	Jan.	4.41
Crittenden.....	62.2	105	June	.....	.....	10.86
Dragon Summit.....	67.7	102	July	23	Jan.	12.85
Dudleyville.....	66.4	109	June	22	Jan.	8.27
Florence.....	69.1	110	June	23	Jan.	9.83
Fort Apache.....	54.5	98	July	12*	Mar.	15.08
Fort Bowie.....	62.3	101	June	21*	Feb.	12.85
Fort Grant.....	62.3	104	July	23*	Feb.	13.55
Fort Huachuca.....	61.1	101*	June	20	Dec.	29.29
Fort Mohave.....	71.5	116*	June	.....	.....	2.51
Gila Bend b.....	71.5	118	July	28	Dec.	7.11

TABLE II.—Voluntary stations—Continued.

State and station.	Temperature—degrees Fahrenheit.					Precipitation. Inches.
	for Mean 1893.	Extremes for 1893.				
		Max.	Month.	Min.	Month.	
Arizona—Continued.						
Holbrook.....	54.2	99	July	7	Jan	7.76
Maricopa.....	72.5	114	Aug	30	Dec	6.60
Mount Huachuca.....	61.2	105	June	16	Feb	16.58
Natural Bridge.....						20.66
Oracle.....	61.8	100*	June	27	Feb	
Pantano.....	66.8	114	June	28	Dec	3.35
Payson.....	53.9			15	Dec	19.30
Peoria.....	60.4	109*	June	31*	Jan	7.49
Phoenix.....	68.8			25	Jan	7.68
Red Rock.....	74.7	110*	June	25	Feb	9.25
Rye.....						17.12
San Carlos.....	63.4	110	Aug	17*	Jan	12.53
San Simon.....	68.8	110*	June	28*	Jan	5.05
Signal.....	67.5	109*	July	24	Jan	9.48
Texas Hill.....	73.9	116*	June	28	Jan	1.90
Tucson a.....	68.2	109	June	24	Dec	13.26
Walnut Ranch.....	58.3	99	June	20	Dec	14.65
Whipple Barracks.....	51.3	95	July	— 2	Dec	14.01
Wilcox.....	65.0			20	Dec	17.56
Yuma.....	75.4	110	July	32	Jan	3.37
Arkansas.						
Arkadelphia.....						46.02
Arkansas City.....						46.70
Ashdown.....	62.7	102	Sept			45.10
Bee Branch.....		101	Sept			45.86
Brinkley.....	59.4	97	Aug	13	Jan	58.52
Camden a.....						54.09
Camden b.....	62.2			14	Jan	52.11
Conway.....	59.4	95	Sept	— 1	Jan	40.07
Dallas.....	60.4	96	July			47.33
Dardanelle.....						45.74
Fayetteville.....	57.6	100	Sept	0	Jan	58.45
Forrest City.....	62.8	98	July	3	Jan	38.17
Helena a.....						69.24
Helena b.....	62.0	101	July			59.89
Hot Springs.....	61.9	103	July	3	Jan	55.86
Keesee Ferry.....	57.4	102	Sept	1	Jan	45.08
Kirby.....	61.0	99	Sept	6	Jan	45.81
Lonoke.....	63.4	98	June	— 2	Jan	61.04
Mount Nebo.....	57.1	94	Sept	8	Jan	47.22
New Gascony.....	62.1	97	Sept	8	Jan	49.33
Newport b.....	59.9	101	July	3	Jan	49.21
Osceola.....	59.7	95	July	0	Jan	52.59
Ozark.....	61.8	102	July	7	Jan	40.80
Pine Bluff.....	63.3	100*	July			44.24
Prescott.....	63.0	96	July	15	Jan	40.87
Russellville.....	60.8	101	Sept	— 6	Jan	49.99
Stuttgart.....	62.4	99	July	0	Jan	51.65
Texasana.....	65.4	100	Sept	20	Jan	28.40
Washington.....	62.7	99	Sept	13	Jan	46.43
Winslow.....	55.6	85	July	3	Jan	51.82
California.						
Anaheim.....	63.4	94	Aug	36	Dec	14.02
Anderson.....	57.4	106	Aug	20	Nov	33.32
Antioch.....	60.5	104	Aug	30	Jan	12.77
Aptos.....	55.4	82	July	30	Jan	23.51
Arcaata.....	61.8	80	June	26	Feb	58.61
Arlington Heights.....	62.7	100*	June	32	Nov	12.19
Athlone.....	63.0	107	July	30	Jan	9.85
Auburn.....	61.9	103	July	29	Feb	34.77
Bakersfield a.....	61.8	108*	July	32	Jan	5.23
Bakersfield b.....	62.0			22*	Jan	4.03
Ballast Point Lighthouse.....						10.65
Barstow.....	61.7	107	July	27	Jan	2.15
Beaumont.....	63.4	102	Aug	30	Mar	5.23
Belmont.....	60.4	90	June	33	Jan	
Berendo.....	66.1	112	July	30	Feb	7.65
Berkeley.....	56.2	91	June	32	Feb	23.99
Brighton.....	63.1	112	Aug	30	Dec	14.91
Campo Seco.....						21.88
Centerville.....	58.8	102	June			18.62
Chino.....	62.9	98	Aug	31	Jan	20.19
Claremont.....	59.3	96	Aug	30	Mar	20.74
Cloverdale.....	62.2	106*	July	28	Feb	42.76
Colegrove.....						22.74
Colusa.....	59.1	102	Aug	28	Nov	11.05
Crescent City.....						76.19
Crescent City Lighthouse.....						77.87
Drytown.....	58.9					20.63
Duarte.....	63.3	100	Aug	35	Jan	31.55
East Brother Lighthouse.....						8.76
Edmanton.....	45.8	93	Aug	13	Feb	67.17
Evergreen.....						15.27
Fall Brook.....	59.1	98	Aug	33*	Jan	22.05
Florin.....	57.8	105	July	28*	Feb	14.93
Folsom City b.....	61.7	107	Aug			24.10
French Corral.....	58.9	100	July			
Galt.....	61.8	106	Aug	33*	Feb	18.77
Georgetown.....	55.9	98	July	24	Mar	63.97
Glendora.....						46.08
Grass Valley a.....						51.09
Gridley.....	57.5	113	Aug			24.50
Guinda.....						17.46
Healdsburg a.....						38.31
Healdsburg b.....						37.13
Hydesville.....	51.0	89	June	25*	Feb	45.79
Independence.....	55.7	101	July	18	Dec	7.04
Kennedy Gold Mine.....	55.4	104	Aug	24	Feb	38.93
Lodi.....	58.6	100	Aug	30	Nov	18.09
Los Gatos b.....	54.8	93*	July	28	Dec	30.17

TABLE II.—Voluntary stations—Continued.

State and station.		Temperature—degrees Fahrenheit.					Precipitation. Inches.
		Mean for 1893.	Extremes for 1893.				
			Max.	Month.	Min.	Month.	
California—Continued.							
Middletown.....	57.2	104	Aug.				36.32
Milton (near).....	60.5	104*	July	32	Nov.		20.58
Napa b.....	57.1	92	July	31	Dec.		18.56
National City.....	61.2	95	Aug.	33	Mar.		12.55
Oakdale.....	57.5	108	Aug.	24	Nov.		13.85
Oleta.....	54.5	99	Aug.	27	Feb.		34.53
Palermo.....	59.0	109	July	25	Feb.		18.08
Pasadena.....	68.8			30	Mar.		26.97
Petaluma.....	57.0	98	July	31	Nov.		22.57
Placerville b.....	53.2	98*	July	22	Feb.		46.13
Pleasanton b.....	55.4	101	June	23	Nov.		13.96
Point Año Nuevo Lighthouse.....							21.95
Point Bonita Lighthouse.....							27.10
Point Conception Lighthouse.....							13.05
Point Lobos Lighthouse.....	52.6	75	June	33	Jan.		15.87
Redding b.....	59.7	104	Aug.	27*	Jan.		41.53
Rio Vista.....		105	July				15.26
Riverside a.....	61.4	104	June	30	Jan.		15.16
Sacramento a.....	53.7	94	Aug.	24*	Feb.		18.99
San Ardo b.....	58.4	111	July	26	Nov.		11.91
San Bernardino.....	61.3	100	July	30*	Jan.		20.29
San Jacinto.....	60.7	103	July	25	Feb.		16.16
San Luis Obispo.....							24.35
San Jose b.....	54.4	92	June	22	Dec.		14.85
Santa Barbara a.....	59.2	88	Oct.	38*	Jan.		19.52
Santa Barbara Lighthouse.....							18.14
Santa Clara a.....	55.0	92	June	29	Dec.		15.03
Santa Cruz b.....	56.6	87	June	33	Dec.		30.41
Santa Maria.....	56.4	88*	Aug.	31*	Jan.		16.69
Saticoy.....							18.73
Stockton a.....	58.5	100*	July	30	Nov.		12.30
Susanville.....	48.5	94	July	3	Feb.		17.40
Sutter Creek.....	52.7	100	Aug.	21*	Jan.		28.08
Tehachapi b.....	52.2	97	July	10	Dec.		12.48
Tulare c.....	63.6	114	July	24	Nov.		6.31
Turlock b.....	55.0	105	Aug.	19	Nov.		8.92
Ukiah.....	54.2	99*	July	24*	Feb.		40.58
Upper Mattole.....	55.2	96*	June	29*	Feb.		78.62
Vacaville a.....	60.5	108	Aug.	30	Feb.		20.24
Ventura.....	59.8	91	May	28	Dec.		18.98
Walnut Creek (near).....	58.7	104	July	30	Jan.		18.81
Wheatland.....	59.4	109	July	26	Mar.		17.50
Willows a.....	58.9	106	Aug.	26	Jan.		16.73
Yreka.....	49.2	98	July	10	Feb.		20.81
Yuba City.....	63.5	104*	July	35*	Jan.		17.28
Colorado.							
Abbott.....							5.81
Alma.....	32.8	78	June	-15	Mar.		12.01
Amherst.....							12.85
Arboles.....							6.81
Avoca.....							9.56
Breckenridge.....	32.2	84	July	-20	Feb.		46.40
Brush.....	49.3	104	June				8.66
Byers.....	53.2	100*	June	1	Feb.		7.28
Castle Rock.....	47.5	94	July	-3	Jan.		10.93
Cheyenne Wells.....	48.5	102	Aug.	-4	Feb.		8.05
Collbran.....							17.08
Como (near).....	35.2	78	July	-7	Feb.		12.07
Cope.....	61.0			-11	Mar.		13.06
Deer Trail.....	52.6	95	July	0	Feb.		18.72
Delta.....	49.2	103	July	-10	Jan.		14.53
Downing.....	62.2	98*	May	-8	Feb.		13.23
Dumont.....	43.0	88	June	-5	Feb.		14.04
East Dale.....							7.64
First View.....	52.6	102	June	-4	Feb.		8.62
Fort Collins.....	47.8	95*	June				6.75
Garnett.....							4.40
Glen Eyrie.....	47.8	91*	June	0	Feb.		8.43
Gold Hill.....	45.1	89	June	-4	Mar.		15.53
Grand Junction.....	52.7	98	July	-2	Jan.		8.21
Greeley.....	49.6	98	July	-11	Dec.		5.40
Hugo.....	48.8	98	June	-11	Feb.		7.95
Hugo (near).....	47.1	95*	June	-5	Feb.		7.62
Husted.....	48.1	97	June	-3	Dec.		7.95
Julesburg.....	49.7	101	June	-13	Feb.		10.56
Kirk.....							5.70
Kit Carson.....	52.7	102*	June	-8	Feb.		8.50
La Jara.....	45.7	90	June	-5	Feb.		7.15
Lamar.....	54.8	106	June	-5	Feb.		7.39
La Porte.....							7.49
Las Animas.....	52.3	102	June	-7	Feb.		5.94
Lavender.....	44.0	94	July	-11	Feb.		15.27
Lay.....	42.0			-21	Nov.		15.89
Le Roy.....	48.6	101	July	-13	Feb.		11.16
Leslie.....							10.59
Loveland.....							6.71
Middle Box Elder.....							4.82
Minneapolis.....	53.4	105*	June	-12	Mar.		11.36
Monte Vista Experiment Station b.....	41.8	87	July	-17	Feb.		6.63
Moraine.....	40.7	83	July	-11	Feb.		14.19
Pagoda (near).....	41.3	96	July	-21	Feb.		22.70
Paonia.....							13.38
Parachute.....	46.1	97	July				8.69
Red Cliff.....							25.74
Rico.....							19.66
River Bend.....		98*	June	4	Feb.		19.47
Rocky Ford.....	52.8	102	June	-1	Feb.		15.95
Saint Cloud.....							14.62
San Luis.....	43.6	91	July	-7	Jan.		10.97
Seassora.....							11.95
Seibert.....							11.09

TABLE II.—Voluntary stations—Continued.

State and station.	Temperature—degrees Fahrenheit.					Precipitation. Inches.
	Mean for 1893.	Extremes for 1893.				
		Max.	Month.	Min.	Month.	
Colorado—Continued.						
Smoky Hill Mine.....	44.9	89	June	— 6	Feb	16.55
Stamford.....	37.0	90	July	—14	Feb	23.00
Steamboat Springs.....	42.2	91*	June	.....	.....	20.55
Sunnyside.....	37.4	82*	June	—10	Feb	21.79
Surface Creek.....	38.0	95	June	1*	Jan	12.32
Thon.....	48.4	102	June	0*	Dec	6.33
Twin Lakes.....	.....	.....	.....	.....	.....	15.24
Walley.....	.....	.....	.....	.....	.....	12.90
Ward District.....	.....	.....	.....	.....	.....	13.36
Watkins.....	54.7	100*	June	2	Feb	9.27
Wilde.....	.....	.....	.....	.....	.....	13.17
Yuma.....	.....	.....	.....	.....	.....	10.26
Zuck.....	.....	.....	.....	.....	.....	9.80
Delaware.						
Dover.....	53.0	96	June	— 5	Jan	41.11
Kirkwood.....	50.8	104*	June	.....	.....	.....
Milford.....	.....	95	June	.....	.....	.....
Millsboro.....	53.1	97*	June	—17	Jan	42.67
Seaford.....	53.5	97	June	— 5	Jan	41.38
District of Columbia.						
Distributing Reservoir.....	53.7	94	July	— 5	Jan	34.37
Receiving Reservoir.....	53.7	94	July	— 6	Jan	30.35
Florida.						
Amelia.....	68.0	96	July	22	Jan	58.59
Avon Park.....	68.7	95*	July	35	Jan	56.53
Bristol.....	70.4	101	July	21	Jan	60.00
Brooksville.....	68.7	94	July	27	Jan	67.36
Clermont.....	72.9	100	July	30	Jan	53.88
De Land.....	.....	.....	.....	.....	.....	.....
Eustis.....	71.9	98	July	26	Jan	44.91
Federal Point.....	68.9	95	July	24	Jan	71.13
Fort Meade.....	70.8	93	July	22	Jan	57.40
Gainesville.....	.....	101	July	.....	.....	.....
Grasmere.....	71.3	95	July	27	Jan	.....
Green Cove Springs.....	69.4	96*	July	24	Jan	61.92
Homeland.....	71.2	97	July	25	Jan	56.13
Hypoluxo.....	.....	95	July	.....	.....	.....
Kissimmee.....	73.7	98	July	25	Jan	52.18
Lake City.....	70.8	96*	July	25	Jan	58.58
Manatee.....	70.4	99	July	28	Jan	55.70
Merritts Island.....	73.5	94	July	34	Jan	46.06
Moseley Hall.....	69.1	96*	June	22	Jan	53.39
Mullet Key.....	73.7	102	Aug	34	Jan	40.46
Myers.....	73.4	92*	July	35	Jan	47.75
New Smyrna.....	69.6	.....	.....	.....	.....	54.79
Ocala.....	60.6	95	July	21	Jan	45.93
Orlando.....	69.2	95	July	.....	.....	50.67
Oxford.....	69.7	94	July	27	Jan	37.19
Plant City.....	71.9	100	July	24	Jan	59.50
St. Andrews Bay.....	.....	97*	June	24	Jan	.....
St. Francis Barracks.....	68.4	94*	June	26	Jan	58.43
St. Petersburg.....	73.3	96*	June	32	Jan	49.00
Tallahassee.....	66.7	93	July	23	Jan	60.46
Tarpon Springs.....	71.8	94	July	28	Jan	48.07
Georgia.						
Adairsville.....	60.6	101	July	— 1	Jan	42.08
Alapaha.....	66.2	100	July	16	Jan	60.76
Albany.....	66.8	101	July	20	Jan	43.28
Americus.....	66.4	100	May	13	Jan	40.66
Athens a.....	61.4	96	July	10	Jan	44.58
Athens b.....	.....	100	July	9	Jan	.....
Bainbridge.....	.....	103	July	.....	.....	.....
Blakely.....	66.2	99	July	18	Jan	48.02
Brag.....	.....	99	July	12	Jan	61.06
Camak.....	.....	101	July	.....	.....	.....
Camilla.....	.....	97	July	.....	.....	.....
Canton.....	.....	.....	.....	.....	.....	41.94
Columbus.....	65.8	97	July	19	Jan	39.78
Cordele.....	.....	108	July	12	Jan	.....
Covington.....	.....	98	July	.....	.....	.....
Dahlonega.....	.....	.....	.....	.....	.....	.....
Darien.....	70.1	101	July	5	Jan	66.58
Diamond.....	.....	94	July	— 6	Jan	.....
Dublin.....	.....	101	July	14	Jan	42.15
Eastman.....	.....	100	July	.....	.....	.....
Elberton.....	61.6	98	July	6	Jan	46.75
Fleming.....	.....	100	July	13	Jan	50.93
Forsyth.....	66.1	98*	July	16	Jan	59.49
Fort Gaines.....	.....	98	July	18	Jan	.....
Gainesville.....	.....	98	Aug	4	Jan	.....
Gillsville.....	60.7	98	July	9	Jan	44.33
Griffin.....	.....	104	July	20	Dec	.....
Hawkinsville.....	.....	100	May	11	Jan	.....
Hephzibah.....	64.7	92*	June	14	Jan	49.76
Homerville.....	67.2	96*	June	20	Jan	56.58
Lafayette.....	.....	95	July	0	Jan	.....
Lagrange.....	62.4	98	July	12	Jan	48.15
Louisville.....	.....	100	July	12	Jan	.....
Lumpkin.....	65.1	98	July	17	Jan	55.07
Macon a.....	.....	96	July	.....	.....	.....
Macon b.....	.....	.....	.....	.....	.....	58.28
Marietta.....	58.7	96	July	6	Jan	43.00
Marshallville.....	.....	95	July	14	Jan	44.32
McArthur.....	.....	98*	July	— 3	Jan	.....
Milledgeville.....	.....	94	July	12	Jan	44.14
Millen.....	64.5	101	July	10	Jan	44.61
Monticello.....	.....	91	May	.....	.....	.....
Morgan.....	.....	98*	May	15	Jan	46.16
Newnan.....	.....	99	July	.....	.....	.....
Picola.....	.....	.....	.....	22	Jan	37.69
Point Peter.....	60.7	102	July	10	Jan	44.25

TABLE II.—*Voluntary stations*—Continued.

State and station.	Temperature—degrees Fahrenheit.					Precipitation.
	Mean for 1893.	Extremes for 1893.				
		Max.	Month.	Min.	Month.	
Georgia—Continued.						
Poulan	64.9	101	July	14	Jan	37.00
Quitman	64.9	100	July	16	Jan	51.80
Rosaca						42.40
Rome	58.8	97	July	2	Jan	47.40
Talbotton		97	July			
Thomasville		98*	July	19	Jan	45.80
Toccoa	59.6	95	July	6	Jan	32.50
Union Point		97	July			43.00
Washington		96	July			
Way Cross		96	July			
Waynesboro		102	July			
West Point		94*	July			
Idaho.						
American Falls		96	Aug	-26	Feb	12.70
Boise Barracks	48.4	106	Aug	0	Jan	13.80
Boonsa City		93	July	-32	Jan	
Delta		93	July			
Fort Sherman	44.3	98	July	-23	Feb	26.30
Garden Valley		99	July	-12	Jan	38.60
Kootenai	42.4	95	Aug	-21	Feb	15.40
Lake	37.6	92	Aug	-27	Feb	11.50
Martin	38.4	93	Aug	-21	Feb	
Paris		94*	July			
Illinois.						
Bloomington	49.7	98	July	-14	Jan	30.20
Bushnell	52.5	99	Sept	-8	Jan	31.40
Carlinville		98	Sept			29.00
Cordova		100	Sept	-23	Jan	36.70
Dixon	45.9	100	Sept			29.70
East Peoria		99*	July	-18	Jan	24.60
Fort Sheridan	47.4	95	July	-2	Jan	44.60
Galva	57.9	95	July	-9	Jan	47.12
Galesburg	54.0	102	Sept	-9	Jan	34.60
Greenville	51.1	100	Sept	-9	Jan	33.01
Griggsville	51.9	96	July	-9	Jan	
Havana		102	Sept	-26	Jan	39.80
Hennepin	54.4	97	Sept	-5	Jan	29.84
Jordana Grove		90	Sept	-20	Jan	38.50
Kankakee	46.4	99*	Aug	-18	Jan	37.17
La Grange	51.8	97	July	-16	Jan	38.57
Martinsville	54.8	102	July	-11	Jan	42.75
McLeansboro		98	July	-8	Jan	30.25
Mascoutah		96	July	0	Jan	27.72
Muddy Valley	54.4	96	July	-14	Jan	41.98
Olney a	51.1	100*	July	-17	Jan	31.72
Olney b	54.8	97	July	-14	Jan	35.91
Oregon		98	Aug	-24	Jan	30.16
Oswego	44.8	96*	July	-26	Jan	29.95
Ottawa	47.7	100	Aug	-26	Jan	37.82
Palatine	52.9	97	July	-17	Jan	37.51
Peoria	51.7	100	July	-14	Jan	37.82
Philo	49.5	98*	July	-21	Jan	33.05
Rantoul	49.9	102	July	-22	Jan	26.78
Riley	44.0	94*	Aug	-20	Jan	28.52
Rockford	45.7	92	Sept	-19	Jan	38.85
Rushville	51.4	100*	Aug	-12	Jan	45.40
St. John	56.0	101	Sept	-2	Jan	40.67
Sycamore	45.2	93*	Aug	-17	Jan	47.80
Walnut		99*	June	-17	Feb	33.46
Winnebago	44.0	95	Aug	-19*	Jan	38.84
Indiana.						
Angola	47.9	100	July	-16	Jan	38.85
Ashboro	51.8	101	June	-17	Jan	37.54
Bedford	53.2	99	July	-14	Jan	45.40
Butterville	52.8	98	July	-16	Jan	40.67
Cambridge City	50.0	94*	July	-19	Jan	47.80
Columbia City	47.5	95	July	-17	Jan	33.46
Columbus	52.4			-12	Jan	38.84
Connorsville	51.0	93	July	-16	Jan	43.87
Crawfordsville		93	Sept	-13	Jan	
Degonia Springs	55.3	93	July	-8	Jan	41.31
Delphi	48.8	96	Aug	-18	Jan	34.52
Evansville						45.91
Farmland	51.6	94	July	-15	Jan	42.73
Franklin	51.6	94	July	-18	Jan	36.63
Hammond		97	July	-19	Jan	
Hawpatch	46.7	96	July	-11	Jan	35.82
Huntingburg	54.4	92*	July	-4	Jan	69.96
Irvington				-15	Jan	
Jeffersonville	55.4	96	July	-8	Jan	44.32
Kokomo	50.5	104	July	-17	Jan	35.19
Laconia	54.5	96	July	-11	Jan	41.77
Lafayette	50.0	99	July	-25	Jan	36.45
Logansport	50.1	95	July	-18	Jan	32.04
Madison	56.0	98	July			52.70
Marengo	55.2	96*	July	-14	Jan	69.95
Marion	51.6	97	Aug	-18	Jan	37.20
Mauzy	50.2	93*	July	-19	Jan	46.98
Michigan City				-15	Jan	
Mount Vernon	51.3	96	July	-5	Jan	44.46
Muncie	54.3	98	July	-12	Jan	53.34
New Albany	55.5	96	July	-11	Jan	44.58
Point Isabel				-18	Jan	
Princeton	53.8	99	July	-12	Jan	39.79
Rockville	50.6	97	July	-19	Jan	41.35
Rushville				-19	Jan	43.84
Seymour	62.4	97	July			48.30
Shelbyville				-17	Jan	
Terre Haute	53.0	99	July			39.61
Union City	49.1			-19	Jan	36.16
Valparaiso	46.7	97	July			

TABLE II.—*Voluntary stations*—Continued.

State and station.		Temperature—degrees Fahrenheit.					Precipitation.
		Mean for 1893.	Extremes for 1893.				
			Max.	Month.	Min.	Month.	
Indiana—Continued.							
Vevay.....	54.3	96	July	—15	Jan	45.50	
Worthington.....	52.2	94	July	—16	Jan	45.52	
Indian Territory.							
Gwendale.....	60.0	103	Sept	5	Feb	24.20	
Lehigh.....	61.7	105	Sept	—4	Jan	34.81	
Purcell.....	62.9	109	July	—2	Jan	32.38	
South McAlester.....				—1	Jan		
Iowa.							
Algona.....	44.2	96	Aug	—24	Feb	19.19	
Alta.....	43.0	95*	Aug	—22	Feb	26.40	
Amama.....	45.3	96*	July	—19	Jan	28.99	
Ames a.....	43.5	97	Aug	—24	Feb	26.02	
Ames b.....						28.48	
Ames c.....			July		Jan	24.14	
Atlantic.....	45.9	102	July	—21*	Jan	27.70	
Audubon.....	45.7	97*	July	—20	Feb	24.80	
Belle Plaine.....	44.9	97*	Aug.	—20	Jan	26.35	
Blakeville.....	45.4	104	Sept	—22	Jan	29.48	
Blockton.....				—15*	Jan		
Bonaparte.....	45.5	101	Aug	—14*	Jan	32.38	
Carroll.....	45.0	94*	July	—21	Feb	29.59	
Cedar Falls.....		99*	Sept	—23	Feb		
Cedar Rapids.....	46.4	94*	July	—16	Jan	30.67	
Centerville.....	49.0	97	Aug	—18	Jan	32.46	
Charles City.....	42.6	96	Aug	—28	Feb	28.42	
Clarinda.....	47.1	97	July	—15	Jan	33.27	
Clinton.....	46.5	96*	Aug	—20	Jan	30.39	
College Springs.....	47.3	97	July	—17	Feb	30.41	
Corning.....	46.8	95	July	—17	Feb	27.54	
Cresco.....	41.0	94	Aug	—27	Jan	30.58	
Decorah.....		96	Sept	—30	Jan		
Delaware.....	42.0	98	Sept	—24	Jan	29.01	
Denison.....				—25	Feb		
Eagle Grove.....				—27	Feb	28.10	
Elkader.....	43.0	100	Sept	—26	Feb	33.58	
Emmetsburg.....	43.1	97*	July	—29	Feb		
Estherville.....				—24	Jan	29.82	
Fayette.....	43.9	100	Sept	—12	Jan	31.38	
Fort Madison.....	51.7	95*	July	—26*	Jan		
Fulton.....				—20	Feb	23.85	
Galva.....	51.4	102	Sept	—18	Feb	32.42	
Glenwood.....	43.0	92	June	—24	Feb	26.66	
Grand Meadow.....	46.8	98	July	—17	Feb		
Grinnell.....				—22	Feb	24.90	
Grundy Center.....	43.8	96	Aug	—23	Feb	31.10	
Hampton.....	42.2	96*	July	—16	Feb	22.80	
Hopeville.....	47.4	95	Sept	—17	Feb	32.13	
Hopkinton.....	47.2	98	Sept	—23	Feb	21.45	
Independence.....	44.1	96*	July	—17	Feb	29.48	
Indianola.....	47.6			—20	Jan	28.44	
Iowa City.....	47.3	99	June	—26	Feb	25.06	
Iowa Falls.....	42.1	97	Aug	—22	Feb		
Jefferson.....	46.6	97	Sept	—22	Feb		
Knoxville.....		97	Aug			29.08	
Keosauqua.....	49.7	98	Sept	—11	Feb	23.10	
Larrabee.....	43.0	97	Sept	—23	Jan	24.40	
Le Claire.....				—16	Feb	24.14	
Logan.....	47.2	97	July				
Maquoketa.....	45.0	96	Aug				
Marshalltown.....		92*	July	—17	Feb		
Mason City.....		98	July			31.45	
Maxon.....	47.3	98*	July	—18*	Jan	28.21	
Mechanicville.....	44.4	94	July	—18	Jan	27.02	
Monticello.....	43.7	95	Aug	—22	Feb	27.61	
Mount Pleasant.....	47.3	90	July				
Mount Vernon.....	46.6	96	July	—20	Jan	29.09	
Mount Ayr.....		94	Aug	—15	Feb		
Murray.....				—16	Feb		
Muscatine.....	46.9	95*	Aug	—19	Jan	31.20	
Newton.....	46.1	95*	July	—19	Feb	29.39	
Osage.....	39.8			—20	Jan	29.44	
Oskaloosa.....	46.9	99	Aug	—21	Jan	23.50	
Orid.....		96*	Aug				
Panama.....	45.8	96	July	—18	Feb	24.12	
Richland.....	46.4	100*	June	—19	Feb	30.81	
Rock Rapids.....		99	July				
Sac City.....		95	Aug	—21	Feb		
Seymour.....		98	Aug				
Sibley.....		93	Sept				
Storm Lake.....	45.0	95	July	—21	Feb	23.15	
Tipton.....	46.0	97*	July	—18*	Jan	27.78	
Villisca.....	48.5	95	July	—19	Jan	26.30	
Vinton.....	44.7	94*	July	—17*	Jan	21.44	
Washington.....	49.6	100*	June	—15	Feb	25.02	
Webster City.....	44.0	99	Aug	—26	Feb	24.94	
West Bend.....		92	Aug				
Williams.....	42.5	96	Aug	—24	Feb	28.91	
Winterset.....		100	Aug	—18	Feb	29.47	
Kansas.							
Abilene.....		103	Sept	—8	Feb		
Achilles.....		104	July				
Allison.....	49.9	134	June	—10	Feb	10.68	
Altosna.....	53.0	104	Sept	—1*	Jan	25.66	
Atchison.....	52.4	100	Sept	—10	Feb	33.67	
Beloit.....		104*	June	5	Dec		
Bucklin.....						11.10	
Buffalo Park.....				—8	Feb		
Cawker City.....		104	July	—14	Feb		
Colby.....	50.9	106	July	—11	Feb	9.69	
Coldwater.....	55.7	110	June	—5	Feb	11.40	

TABLE II.—Voluntary stations—Continued.

State and station.	Temperature—degrees Fahrenheit.					Precipitation, Inches.
	Mean for 1893.	Extremes for 1893.				
		Max.	Month.	Min.	Month.	
Kansas—Continued.						
Collyer	°	°	July	°	Feb	
Columbus	55.5	108	Sept	—2	Jan	36.65
Cunningham	54.2	103	June	—4	Feb	11.53
Downs		107*				21.90
Eleo				—6	Feb	
Eldorado		106	Sept	—6	Jan	14.88
Elk City	56.4	105	Sept	5	Feb	27.98
Ellis		110	June	0	Feb	
Emporia	54.7	98	Sept	—4	Feb	24.69
Englewood	55.9	113	June	—4	Feb	12.36
Eureka Ranch	52.8	111	June	—11	Feb	13.14
Fort Riley	54.9	103	Sept	—7	Feb	29.72
Gove City	51.7	108	June	—9	Feb	15.38
Grainfield		106		—6	Feb	12.95
Greensburg		106	June	—2	Feb	
Grenola	56.4	111	Aug	—2	Feb	18.34
Grinnell	54.6	110	July	—8	Feb	10.95
Halstead		98*	July			
Havensville		100	July	—8	Feb	
Hays City	55.8	109	June	—1	Mar	18.13
Hesston				—8	Feb	
Horton	51.8	99	July	—9	Feb	30.77
Hutchinson	56.5	109	Sept	4	Feb	16.57
Independence	55.7	109	Sept	0*	Jan	28.16
Kansas City		96	July	—7	Feb	
Kellogg		110	June	—6	Feb	
Kiowa	58.5	111	June	—1	Feb	14.48
La Crosse		110	June	—5	Feb	
Lakin		114	June	—9	Feb	
Lawrence	52.4	99	Sept	—6	Feb	34.71
Lebo	54.0	104	Sept	—9	Jan	37.61
Leoti	52.5	107	June	—10	Feb	10.64
Liberal		108*	June	—4*	Jan	
McAllister				—11	Feb	
McPherson	54.1	102*	July	—6	Feb	22.43
Macksville		112	June			
Manhattan b.	52.1	109	Sept	—6	Feb	27.05
Manhattan c.		104	July	—6	Feb	24.27
Mankato	51.2	100*	June	—13	Feb	18.41
Marion		102	July	—5	Feb	23.58
Marmaton				—4*	Jan	34.78
Medicine Lodge						13.67
Minneapolis	53.3	106	July	—8	Feb	20.22
Monument	50.4	105	July	—18	Feb	11.24
Morland	51.9	106	June	—11	Feb	15.02
Morse				—9	Feb	
Morton	56.0	109*	June	—1	Feb	11.30
Mount Hope		103	Sept			
Ness City		101	July			
New England Ranch				—11	Jan	
Norton		103*	June			
Oberlin						21.78
Olathe		101	Sept			
Oswego	55.6	108	Sept	—7	Jan	31.21
Page				—9	Feb	
Pauline	54.3	105	July	0	Feb	25.48
Phillipsburg	52.2	106	June	—15	Feb	16.70
Pleasant Dale	52.2	109	June	—13	Feb	17.63
Quinter	55.7	108	June	—8	Feb	12.11
Rome	56.8	106	Sept	1	Feb	16.04
Salina				—5	Feb	
Sedan	56.8	107	Sept	—2	Feb	22.28
Sharon Springs		108	July	—1	Feb	12.70
Shields				—8	Feb	
Sterling	57.3	105	July	—5	Feb	15.13
Syracuse		101	May	—5	Feb	
Topeka		102	Sept	—8	Feb	
Tribune	55.6	105	June	—7	Feb	10.69
Ulysses		111*	June	—1	Feb	
Utica	50.7	111	June	—7	Feb	15.63
Wa Keeney	53.4	100*	June	—11	Feb	11.68
Wakefield	54.9	106	June	—4	Feb	31.46
Wallace a.						10.23
Wallace b.	58.0	106	July	—8	Feb	9.84
Wamego	53.0	104	Sept	—4	Feb	31.22
Washington		105	July			
Winona		110	July	—6	Feb	12.53
Yates Center		106	Sept			31.00
Kentucky.						
Bowling Green		94	July	—3	Jan	47.74
Burkesville				—3	Jan	
Caddo		96	July	—14	Jan	
Canton		97	July	0	Jan	
Carrollton	54.7	100	July	—14	Jan	44.89
Catlettsburg	56.1	97	July	—8	Jan	35.15
Central City				—8	Jan	
Earlington	58.8	99	July	3	Jan	51.89
Eddyville						44.36
Edmonton	54.4	92	July	—5	Jan	50.95
Eubanks		94*	July			
Falmouth						41.45
Franklin	57.9	98	July	—2	Jan	56.82
Greendale		95	July			
Greensburg	55.2	92	July	—9	Jan	51.70
Harrodsburg	54.5	101	July	—13	Jan	41.49
Hendricks				—22	Jan	
Lagrange				—13	Jan	
Louisa	54.4	99	July	—22	Jan	40.66
Matlock		96	July	—4	Jan	
Middlesborough	54.4	93	July	—19	Jan	42.56
Mount Sterling	52.6	93	July	—13	Jan	43.26

TABLE II.—Voluntary stations—Continued.

State and station.	Temperature—degrees Fahrenheit.				Precipitation.
	Mean for 1893.	Extremes for 1893.			
		Max.	Month.	Min.		Month.
<i>Kentucky—Continued.</i>	°	°		°	<i>Inches.</i>
Munfordville.....		95	July		
Pellville.....	56.0	97	July	—10	Jan..... 42.96
Paducah.....	59.0	100	July	4	Jan..... 44.77
Princeton.....	55.6	101	July	—3	Jan..... 36.71
Richmond.....			—14	Jan.....	
Russellville.....	57.8	95	July	—2	Jan..... 49.30
Shelby City.....	54.6	92	July	—7	Jan..... 41.28
Shelbyville.....	54.2	100	July	—15	Jan..... 43.78
South Fork.....					40.11
Springfield.....		97	Sept	—16	Jan.....
Wickliffe.....		96	July	2	Jan.....
<i>Louisiana.</i>					
Abbeville.....	69.1	97	June	24	Jan..... 45.62
Alexandria.....	64.0	98	June	19	Jan..... 51.76
Amite.....	68.2	99	June	23	Dec..... 67.91
Baton Rouge.....		93	July	25	Jan..... 56.16
Calhoun.....	64.1	97	June	18	Jan..... 43.21
Cameron.....		99	June		47.09
Cheneyville.....		96	Sept	22	Dec.....
Clinton.....		102	Sept		53.97
Coushatta.....		100	July	20	Jan.....
Covington.....		96	June	22	Jan.....
Davis.....	62.9	98	July	16	Jan..... 48.27
Delhi.....					44.55
Donaldsonville.....	63.5	95	July	30	Jan..... 53.54
Emilie.....	67.8	95	June	26	Jan..... 48.74
Farmerville.....	63.8	96	Sept	19	Jan..... 49.35
Franklin.....	69.3	96	June	26	Jan..... 55.48
Girard.....		99	July		
Grand Coteau.....	68.1	94	June	28	Jan..... 53.60
Hammond.....		97	July		57.77
Hamburg.....		94	July		
Houma.....				24	Jan.....
Jeanerette.....	69.3	99	June	24	Jan..... 57.97
Lafayette.....	69.4	100	June	24	Jan..... 46.67
Lake Charles.....	62.8	97	June	21	Jan..... 59.20
Lake Providence.....		100	July	22	Dec.....
Lawrence.....		97	June	33	Jan.....
Liberty Hill.....		105	Sept	21	Jan.....
Many.....		99	Aug		
Maurepas.....	68.2	101	June	20	Jan..... 54.76
Melville.....		95	Sept	26	Jan.....
Minden.....		101	July		
Monroe.....	65.9	98	July	23	Jan..... 43.64
Natchitoches.....		98	Sept		
New Iberia.....	69.0	96	June	27	Jan..... 42.82
Opelousas.....	68.3	95	July	24	Jan..... 50.14
Oxford.....		102	July		50.14
Paincourtville.....		97	June	27	Dec..... 57.42
Plain Dealing.....		97	July	16	Jan.....
Plaquemine.....		99	June	26	Jan.....
Port Eads.....		94	June	34	Jan..... 42.65
Rayne.....	67.3	96	June	24	Jan..... 39.94
Roseland.....	67.4	98	June	22	Jan..... 57.26
Sugartown.....		94	June		
Schriever.....		102	July	26	Jan..... 50.76
Shell Beach.....		96	June	29	Jan.....
Sugar Experiment Station.....	68.2	99	June	28	Jan..... 56.02
Thibodeaux.....					38.30
Wallace.....	68.6	97	May	27	Jan..... 64.74
West End.....					53.72
Winnfield.....		98	Sept		
Winnboro.....		99	June		21.78
<i>Maryland.</i>					
Barren Creek Springs.....	53.9	94	July	—10	Jan..... 36.82
Benedict.....		99	June		
Boettcherville.....	51.0	99	July	—14	Jan..... 38.75
Cambridge.....	57.8	97	July	4	Jan..... 48.01
Cumberland a.....	52.3	94	July	—5	Jan..... 30.58
Cumberland b.....	53.1	97	July	—3	Jan..... 31.62
Darlington.....	51.1	95	July	—5	Jan..... 39.76
Denton.....		102	July	—17	Jan.....
Easton.....	54.3	95	June	—1	Jan..... 39.89
Fallston.....	50.8	97	Aug	—3	Jan..... 47.66
Fenby.....	50.7	94	July	—2	Jan..... 43.60
Frederick.....		97	July	—3	Jan.....
Glyndon.....				—3	Jan.....
Great Falls.....	52.5	96	July	—8	Jan..... 31.76
Leonardtown.....			—2	Jan.....	
McDonogh.....	52.8	93	June	—3	Jan.....
Mount St. Marys.....		99	July	—6	Jan.....
New Market.....	51.4	95	June	—4	Jan..... 32.10
Oakland.....		87	July		
Salisbury.....			—7	Jan.....	
Solomons.....	55.8	95	June	4	Jan..... 41.89
Sunnyside.....	45.4	91	June		39.66
Woodstock.....		95	June	—14	Jan.....
<i>Michigan.</i>					
Adrian.....	46.9	99	Aug	—18	Jan..... 38.98
Albion.....	48.7	91	July		
Allegan.....	48.6	97	Aug	—10	Jan..... 37.41
Alma.....	43.5	94	June	—17	Jan..... 32.88
Ann Arbor.....	45.3	92	Aug	—11	Jan..... 35.39
Arbela.....	41.9	91	July	—10	Jan..... 41.37
Ball Mountain.....		91	July	—17	Jan..... 37.20
Bear Lake.....	41.8	94	Aug	—18	Feb..... 32.72
Bellaire.....	41.0	96	Aug	—26	Feb..... 25.29
Benton Harbor.....	47.4	94	July	—7	Jan..... 44.39
Berlin.....	44.4	98	July	—18	Jan..... 37.39
Berrien Springs a.....	48.7	100	July	—12	Jan..... 47.66
Berrien Springs b.....					34.29

TABLE II.—Voluntary stations—Continued.

State and station.	Temperature—degrees Fahrenheit.					Precipitation. Inches.
	Mean for 1893.	Extremes for 1893.				
		Max.	Month.	Min.	Month.	
Michigan—Continued.						
Birch Run.....	95	Aug	-18	Jan	34.37	
Birmingham.....	46.4	96	July	-14	Jan	41.48
Boon.....	40.9	94	June	-22	Feb	29.04
Bronson.....	46.3	95	Aug	-15	Jan	28.88
Brown City.....	44.0	94	Aug	-14	Jan	25.99
Caldwell.....	37.0	91	June	-20	Feb	25.99
Calumet.....	95	95	Aug	-15	Jan	27.82
Charlevoix.....	39.7	93	Aug	-17	Jan	24.97
Cheboygan.....	46.5	97	July	-16	Jan	34.97
Clinton.....	38.1	97	June	-25	Feb	25.99
Crystal Falls.....	95	95	Aug	-15	Jan	27.82
East Tawas.....	95	95	June	-25	Jan	25.99
Evart.....	45.0	96	Aug	-13	Jan	26.35
Fairview.....	44.8	94	July	-15	Jan	39.60
Fitchburg.....	44.2	98	Aug	-24	Jan	33.42
Flint.....	40.5	93	June	-22	Jan	37.10
Gaylord.....	86	94	Aug	-12	Jan	27.40
Glenwood.....	47.9	94	July	-10	Jan	38.33
Grape.....	95	95	Aug	-22	Jan	33.61
Grayling.....	47.6	93	Aug	-9	Jan	34.71
Hanover.....	94	94	June	-27	Jan	39.58
Harbor Springs.....	94	94	June	-18	Jan	34.71
Harrison.....	40.5	96	July	-21	Feb	39.58
Harrisville.....	45.2	93	June	-15	Jan	40.74
Hart.....	45.4	93	June	-14	Jan	29.5
Hastings.....	44.1	94	June	-16	Jan	27.25
Hayes.....	44.1	94	June	-17	Jan	34.65
Highland Station.....	44.8	94	July	-23	Jan	30.49
Hillsdale.....	44.1	94	Aug	-15	Jan	34.60
Howell.....	44.1	94	Aug	-10	Jan	34.60
Jeddo.....	47.2	94	Aug	-17	Feb	36.43
Kalamazoo.....	45.0	94	Aug	-11	Jan	36.43
Lake City.....	45.0	94	Aug	-11	Jan	36.43
Lansing.....	95	95	June	-15	Feb	32.73
Lathrop.....	96	96	Aug	-15	Feb	32.73
Lewiston.....	96	96	Aug	-15	Feb	32.73
Lodi.....	98	98	June	-17	Jan	32.73
Lyons.....	98	98	June	-17	Jan	32.73
McMillan.....	98	98	June	-17	Jan	32.73
Madison.....	46.2	94	July	-13	Jan	32.46
Marshall.....	97	97	June	-12	Jan	35.20
Mayville.....	92	92	Aug	-14	Jan	35.20
Mio.....	100	100	June	-21	Jan	34.01
Mottville.....	47.0	100	Aug	-21	Jan	34.01
Noble.....	92	92	July	-16	Jan	32.02
North Marshall.....	43.6	92	July	-16	Jan	32.02
Olivet.....	90	90	June	-13	Jan	38.27
Ovid.....	44.4	94	Aug	-12	Jan	38.27
Paris.....	93	93	June	-31	Jan	38.27
Parkville.....	95	95	July	-14	Jan	42.65
Rawsonville.....	98	98	June	-25	Feb	42.65
Rockland.....	98	98	June	-25	Feb	42.65
Romeo.....	92	92	Aug	-22	Jan	33.51
St. Ignace.....	38.8	92	Aug	-22	Jan	39.02
Sand Beach.....	43.5	95	Aug	-12	Jan	34.78
Thornville.....	46.6	97	Aug	-12	Jan	32.60
Vandalia.....	46.9	91	July	-12	Jan	41.80
Washington.....	96	96	Aug	-17	Jan	35.35
Williamston.....	90	90	July	-8	Jan	39.02
Ypsilanti.....	42.8	93	July	-13	Jan	39.02
Minnesota.						
Ada.....	40.8	98	June	-27	Feb	19.31
Albert Lea.....	40.8	98	June	-27	Feb	27.25
Alexandria.....	34.3	98	July	-27	Feb	28.39
Alexandria.....	40.8	95	July	-27	Feb	22.24
Bingham Lake.....	39.6	95	July	-27	Feb	20.04
Bird Island.....	39.6	95	July	-27	Feb	20.04
Blooming Prairie.....	37.4	98	July	-35	Feb	31.92
Cambridge.....	40.6	99	July	-33	Feb	22.54
Camden.....	38.9	99	July	-33	Feb	23.05
Clear Lake.....	42.0	99	July	-32	Feb	24.90
Collegeville.....	35.4	104	July	-30	Feb	25.91
Crookston.....	40.8	104	July	-30	Feb	24.06
Farmington.....	37.1	96	July	-39	Feb	25.30
Fergus Falls.....	39.1	97	June	-33	Feb	27.45
Fort Ripley.....	43.0	102	July	-33	Feb	22.14
Grand Meadow.....	35.3	99	July	-42	Feb	24.38
Granite Falls.....	35.3	99	July	-42	Feb	23.67
Lake Winnibigoshish.....	35.5	99	July	-42	Feb	24.90
Leech Lake.....	36.4	99	July	-42	Feb	25.91
Long Prairie.....	40.4	97	July	-29	Feb	24.06
Maple Plain.....	42.5	100	July	-32	Jan	25.30
Minneapolis.....	42.9	100	July	-32	Jan	24.90
Minnesota City.....	40.2	100	July	-35	Feb	21.56
Montevideo.....	37.4	97	July	-36	Feb	22.54
Morris.....	36.9	97	July	-36	Feb	24.38
Pine River.....	33.8	97	July	-36	Feb	26.07
Pokegama Falls.....	41.1	96	Aug	-29	Feb	21.06
Redwood Falls.....	40.5	93	July	-29	Feb	21.69
Rochester.....	40.5	94	July	-30	Jan	21.69
Rolling Green.....	40.2	94	July	-30	Jan	21.69
St. Charles.....	37.4	96	June	-36	Feb	21.69
St. Cloud.....	36.4	96	June	-36	Feb	21.69
St. Olaf.....	43.2	96	June	-36	Feb	21.69
Sandy Lake Dam.....	38.3	96	July	-27	Feb	23.67
Wabasha.....	45.0	98	July	-27	Feb	30.44
Willmar.....	45.0	98	July	-27	Feb	20.04
Winona.....	45.0	98	July	-27	Feb	28.30
Mississippi.						
Agricultural College.....	63.5	99	July	-9	Jan	40.17
Batesville.....	61.1	97	July	-3	Jan	63.16

TABLE II.—Voluntary stations—Continued.

State and station.	Temperature—degrees Fahrenheit.					Precipitation. Inches.
	Mean for 1893.	Extremes for 1893.				
		Max.	Month.	Min.	Month.	
<i>Mississippi—Continued.</i>						
Briers.....	65.1	94	Sept	22	Jan	49.48
Canton.....	64.0	95	July	20	Jan	45.94
Crystal Springs.....	65.9	101*	June	19	Jan	60.31
Enterprise.....	63.5	98	July	15	Jan	49.42
Fayette.....	66.4	94	July	20	Jan	58.35
Kosciusko.....	62.7	97	July	8	Jan	56.33
Lake.....	67.5	95*	June	25	Jan	58.06
Logtown.....	63.1	99	July	4	Jan	40.94
Louisville.....	61.9	98	July	4	Jan	53.06
Pontotoc.....	61.2	104	July	8	Jan	55.05
Water Valley.....	61.2	104	July	8	Jan	51.86
Yazoo City.....	61.2	104	July	8	Jan	51.86
<i>Missouri.</i>						
Appleton City.....	54.9	105	Sept	— 2	Jan	31.67
Arthur.....	49.5	97*	July	—12	Feb	36.20
Bethany.....	49.5	97*	July	—12	Feb	33.80
Big Piney.....	52.7	96	June	— 9	Jan	41.75
Brunswick.....	52.3	97	Sept	— 7	Feb	41.11
Carrollton.....	52.3	97	Sept	— 7	Feb	41.62
Conception.....	54.2	104	Sept	— 4	Feb	40.64
Condordia.....	52.1	97	Sept	—10	Feb	36.58
Darksville.....	51.0	97	Sept	— 9	Jan	33.16
East Lynne.....	51.0	97	Sept	— 9	Jan	36.26
Edge Hill.....	50.0	100	Sept	— 7	Feb	43.86
Eight Mile.....	52.4	100	Sept	— 7	Feb	35.96
Eldon.....	53.6	106	Sept	— 2	Jan	46.96
Farmersville.....	54.1	94	Sept	—10	Feb	39.70
Fox Creek.....	54.1	94	Sept	—10	Feb	42.09
Fulton.....	52.8	95	June	—11	Feb	40.23
Gallatin.....	52.6	100	Sept	— 9	Feb	44.09
Glasgow.....	52.7	100	Sept	— 9	Feb	39.03
Gordonville.....	52.7	100	Sept	— 2	Jan	47.45
Gorin.....	49.2	107	Sept	— 6	Feb	26.99
Harrisonville.....	49.2	107	Sept	— 6	Feb	32.27
Hastain.....	55.7	101	Sept	— 2*	Jan	37.36
Ironton.....	55.7	101	Sept	— 2*	Jan	46.47
Lamar.....	55.7	101	Sept	— 2*	Jan	34.30
Lamonte.....	54.3	101	Sept	— 3	Jan	39.42
Lebanon.....	52.9	100	Sept	— 3	Jan	43.76
Lexington.....	52.9	100	Sept	— 8	Feb	51.68
Marshall.....	51.5	100	Sept	— 8	Feb	38.89
McCune Station.....	51.4	103	Sept	—10	Jan	32.00
Mine La Motte.....	55.1	96	Sept	— 4	Jan	37.09
New Hartford.....	54.7	98	Sept	0*	Jan	26.88
New Haven.....	54.7	98	Sept	0*	Jan	39.00
New Palestine.....	54.7	98	Sept	0*	Jan	38.25
Oakfield.....	53.9	99	Sept	— 4	Jan	40.30
Oak Ridge.....	53.9	99	Sept	— 4	Jan	34.62
Olden.....	57.1	96	Sept	0	Jan	43.49
Oregon a.....	51.0	96*	July	—12	Feb	33.41
Oregon b.....	50.6	96	July	— 8	Feb	32.68
St. Charles.....	54.0	102	Sept	— 4	Jan	38.21
St. Louis.....	53.1	100	Sept	— 3	Jan	41.62
Palmyra.....	54.6	99	Sept	— 5	Jan	33.45
Phillipsburg.....	54.6	99	Sept	— 5	Jan	37.40
Pickering.....	46.4	99	Sept	—16	Feb	37.03
Platte River.....	49.9	96*	July	— 4*	Jan	37.42
Princeton.....	49.5	99	Aug	—12	Jan	35.48
Rolla.....	49.5	99	Aug	—12	Jan	46.15
Sedalia.....	53.6	102	Sept	—10	Feb	42.76
Shelbina.....	53.6	102	Sept	—10	Feb	37.47
Steelville.....	53.6	102	Sept	—10	Feb	50.46
Steffenville.....	53.6	102	Sept	—10	Feb	36.77
Stellada.....	55.0	104	Sept	— 9	Feb	33.42
Vermont.....	52.2	100	Sept	— 6	Feb	42.63
Warrenton.....	52.2	100	Sept	— 6	Feb	42.75
Wheatland.....	52.2	100	Sept	— 6	Feb	40.99
<i>Montana.</i>						
Boulder.....	40.2	95	July	—39	Jan	9.57
Choteau.....	42.3	105*	July	—42	Feb	11.84
Fort Custer.....	45.8	110	July	—44	Feb	14.50
Fort Keogh.....	41.5	110	July	—42	Feb	11.18
Fort Missoula.....	40.6	101	Aug	—27	Feb	22.26
Glendive.....	42.6	117	July	—47	Feb	13.04
Great Falls.....	45.3	103	July	—42	Feb	13.96
Hogan.....	40.2	104	Aug	—52	Feb	12.86
Martinsdale.....	40.2	104	Aug	—52	Feb	15.99
Virginia City.....	41.4	97	July	—24	Jan	11.35
<i>Nebraska.</i>						
Agee.....	47.2	105	Sept	— 18	Feb	15.54
Ashland.....	48.4	100	July	—14	Feb	28.42
Ashton.....	47.4	104	Sept	—20	Feb	12.14
Bassett.....	44.9	102	July	—28	Feb	15.74
Beaver City.....	50.6	103	June	—14	Feb	18.10
Beatrice.....	47.5	98	Sept	—23	Feb	22.01
Callaway.....	47.5	98	Sept	—23	Feb	12.69
Cornlea.....	43.9	97	July	—22	Feb	19.67
Creighton.....	43.9	97	July	—22	Feb	23.30
David City.....	47.8	102	Aug	—16	Feb	26.35
Ericson.....	47.8	102	Aug	—21	Feb	15.41
Fairbury.....	47.8	102	Aug	—21	Feb	21.07
Fort Robinson.....	47.4	102	June	—21	Feb	10.86
Fort Sidney.....	47.0	102*	July	—15	Feb	8.67
Franklin.....	50.8	104	July	—14	Feb	20.41
Geneva.....	47.5	97	Aug	—22	Feb	28.57
Genoa.....	47.5	97	Aug	—22	Feb	24.79
Gering.....	48.3	101	June	—16*	Jan	9.82
Haigler.....	49.2	104*	June	0*	Jan	21.07
Hartington.....	44.3	99	July	—25	Feb	22.21
Hebron.....	51.1	101	Sept	—14	Feb	17.46
Holdrege.....	48.3	101	Sept	—16	Feb	17.15

TABLE II.—Voluntary stations—Continued.

State and station.	Temperature—degrees Fahrenheit.					Precipitation. Inches.
	Mean 1893.	Extremes for 1893.				
		Max.	Month.	Min.	Month.	
Nebraska—Continued.						
Kennedy	46.5	99	July	-19	Feb	14.4
Lexington	51.7	98	June	-21	Feb	18.5
Lincoln	49.6	99	July	-14	Feb	19.7
Madrid	47.6	101	July	-16	Feb	10.9
Marquette	103	July	-19	Feb	20.8	
Minden	48.6	101*	June	-16	Feb	26.7
Mullen	47.5	96	July	-17	Feb	9.7
Neabitt	46.2	101	July	-20	Feb	21.8
Norfolk	46.0	94	July	-20	Feb	15.4
North Loup	48.5	96	June	-25	Feb	16.6
O'Neill	45.6	101*	July	-22	Feb	9.4
Ough	46.5	102	July	-24	Feb	17.5
Palmer	48.1	100	July	-20	Feb	28.6
Plattsmouth	48.1	100*	July	-20	Feb	18.1
Ravenna	46.9	101*	July	-21	Feb	17.5
Red Cloud	50.9	105	July	-14	Feb	18.9
Santee Agency	44.6	105	July	-18	Feb	24.8
Seward	49.1	105	July	-18	Feb	22.0
Stanton	51.0	101	May	-10	Feb	13.9
State Farm	50.1	102	July	-13	Feb	22.0
Superior	51.0	104	July	-14	Feb	27.1
Syracuse	48.1	100	July	-18	Feb	22.6
Table Rock	45.3	102	July	-20	Feb	22.6
Wallace	44.0	95	July	-18	Feb	10.4
Weeping Water	44.0	95	July	-18	Feb	22.1
Whitman	44.0	95	July	-18	Feb	10.4
Wilcox	44.0	95	July	-18	Feb	22.1
Nevada.						
Austin	45.1	91	July	2	Feb	10.1
Battle Mountain	51.5	97	July	-6	Feb	3.7
Belmont	44.4	89	July	-5	Feb	9.0
Beowawe	48.7	100	Aug	-11	Jan	11.5
Candelaria	51.8	97	July	12	Feb	4.8
Crane's Ranch	45.3	107	July	-30	Feb	5.0
Downeyville	41.8	106	July	-14	Jan	9.1
Elko	43.5	98	July	-12	Feb	4.9
Ely	48.9	110	July	-32	Feb	13.4
Golconda	40.9	108	July	-10	Feb	3.1
Halleck	51.8	98	July	8	Mar	3.8
Hawthorne	45.1	100	July	7	Feb	2.8
Hot Springs	48.0	93	July	-15	Feb	22.6
Lewers Ranch	49.4	104	Aug	-11	Jan	9.1
Mill City	44.9	94	July	-7	Jan	46.2
Monitors Ranch	44.9	104	July	-11	Jan	46.0
Palisade	47.3	93	July	-7	Dec	42.2
Palmetto	47.4	95	July	-8	Feb	45.3
Reno State University	50.1	95	July	-8	Feb	44.7
St. Clair	37.0	99	July	-40	Feb	40.6
Stofel	41.9	88	July	-8	Feb	40.6
South Camp	41.9	102	Aug	-5	Dec	45.5
Tono	49.4	96	July	-10	Jan	42.7
Tybo	49.6	96	July	-10	Jan	39.6
Virginia City	51.4	104	July	4	Dec	44.2
Wabuska	51.4	104	July	4	Dec	43.8
New Jersey.						
Allaire	49.6	96	June	-14	Jan	43.5
Asbury Park	51.0	97	June	-4	Jan	43.5
Barneget	50.8	98	July	-5	Jan	46.7
Bayonne	51.2	100	June	-6	Jan	93
Beverly	50.1	103	June	-13	Jan	89
Billingsport	52.0	98	July	-4	Jan	89
Boonton	54.6	98	June	-5	Jan	96
Bridgeton	51.6	97	June	-7	Jan	94
Camden	52.4	96	July	-7	Jan	93
Cape May	47.4	98	June	-1	Jan	92
Deckertown	47.5	97	June	-13	Jan	89
Dover	50.7	99	June	-13	Jan	92
Egg Harbor City	50.4	103	June	-2	Jan	96
Elizabeth	51.0	99	June	-15	Jan	96
Franklinville	50.8	94	June	-4	Jan	90
Freehold	48.7	98	June	-18	Jan	93
Friesburg	49.7	94	June	-18	Jan	93
Gillette	50.2	98	June	-10	Jan	93
Hanover	50.2	98	June	-10	Jan	93
Highland Park	50.1	100	June	-14	Jan	93
Hightstown	51.7	103	June	-6	Jan	93
Imlaystown	50.1	97	June	-13	Jan	93
Junction	49.8	96	June	-8	Jan	93
Lambertville	54.0	96	June	-8	Jan	93
Locktown	51.2	98	June	-9	Jan	93
Millville	49.8	96	June	-1	Jan	93
Moorestown	50.4	97	June	-1	Jan	93
Newark a	51.3	100	June	-8	Jan	93
Newark b	49.8	96	June	-10	Jan	93
New Brunswick a	47.3	101	June	-10	Jan	93
New Brunswick b	51.9	93	July	-4	Jan	93
Newton	53.0	101	June	-5	Jan	93
Ocean City	51.7	101	June	0	Jan	93
Oceanic	50.5	100	June	-8	Jan	93
Paterson	48.8	98	June	-9	Jan	93
Pensauken	54.1	96	June	-4	Jan	93
Plainfield	49.8	99	Aug	-21	Jan	93
Rancocas	51.9	102	July	-5	Jan	93
Readington	50.8	99	July	-20	Jan	93
River Vale	49.5	97	June	-2	Jan	93
Salem	48.1	95	June	-20	Jan	93
Somerville	50.4	99	June	-15	Jan	93
South Orange	52.8	98	July	-5	Jan	93
Tenafly	52.8	98	July	-5	Jan	93
Toms River	52.8	98	July	-5	Jan	93
Trenton	52.8	98	July	-5	Jan	93

TABLE II.—Voluntary stations—Continued.

State and station.	Temperature—degrees Fahrenheit.					Precipitation. Inches.
	for Mean 1893.	Extremes for 1893.				
		Max.	Month.	Min.	Month.	
<i>New Jersey—Continued.</i>						
Vineland	53.1	102	July			39.40
Whiting	52.1	101	June	-10	Jan	41.14
Woodbine	50.9	95	July	-15	Jan	43.26
<i>New Mexico.</i>						
Albert	58.4	104*	June	11	Feb	12.53
Albuquerque	56.2	98	July	11	Dec	7.42
Chama	46.0	93*	June	-12	Dec	24.70
Deming	68.6	108	June	18	Dec	12.60
Estalina Springs						11.19
Fort Bayard	55.7	99*	June	13	Dec	15.47
Gallinas Spring	56.0	107	July	1	Dec	13.04
Halls Peak	45.4	91	July	-17	Dec	15.35
La Luz						10.66
Las Cruces						10.82
Las Vegas	50.6	94	July	3	Dec	19.99
Lordsburg						9.32
Los Lunas	52.2	103	July	13	Jan	8.40
Olio	52.6	101*	June	4	Jan	5.02
Socorro	58.5	102	June	10	Jan	8.06
Taos	47.6	99	July	-1*	Jan	10.26
<i>New York.</i>						
Addison	45.6	93	June	-14	Jan	35.37
Alfred Center	43.0	93	Aug	-10	Jan	44.77
Angelica	43.1	93	Aug	-23	Jan	39.97
Arcade	42.4	90	Aug	-9*	Jan	46.47
Atlanta						37.12
Baldwinsville	45.3	93	Aug	-5	Feb	45.22
Binghamton	45.1	93	Aug	-28	Jan	39.93
Brookfield	42.9	92	Aug	-10	Dec	36.39
Cherry Creek						63.02
Cooperstown	42.8	89	Aug	-10	Feb	44.87
Cortland	43.9	86*	June	-12	Jan	38.65
Demster						37.85
Eden Center	45.8	99	Aug	-10	Feb	71.05
Factoryville	46.2	97	Aug	-22	Jan	42.31
Fleming	46.0	94	Aug	-5	Jan	24.59
Friendship	44.3	93	Aug			40.22
Gloversville	42.2	94	Aug	-13	Feb	41.59
Honeyhead Brook	45.3	94	June	-13	Jan	48.67
Humphrey	44.7	90	Aug	-8*	Jan	52.42
Ithaca	45.2	93	June	-12	Jan	37.58
Kings Station						50.91
Lebanon Springs	43.6	91	Aug	-13	Jan	
Le Roy	45.0	92	Aug	-7*	Jan	48.58
Lockport	46.2	94	Aug	-5	Jan	46.48
Lowville	41.5	94	Aug	-20	Dec	46.31
Lyons	46.7	92*	July	-2	Jan	36.25
Malone	40.6	90	Aug	-21	Jan	42.63
Middletown		94	June	6	Jan	
Minnewaska		92	June	-10	Feb	50.22
Mount Morris	45.5	95*	July	-10	Jan	
Newark						40.23
New Lisbon	42.7	91	June	-13	Jan	40.89
Number Four	39.6	88	Aug	-21*	Jan	50.91
Oxford	44.2	93	June	-15	Jan	48.22
Palerino	43.8	98	Aug	-9*	Jan	36.60
Perry	43.5	95	Aug	-14	Jan	37.90
Phoenix						41.93
Port Jervis	46.7	93	June	-12	Jan	50.70
Potsdam		89*	July	-19	Jan	41.72
Poughkeepsie	47.0	98	June	-19	Jan	41.15
Romulus	46.6	96*	June	-5	Jan	29.74
Rondout						54.39
Setauket	49.0	94	July	2	Jan	48.65
South Canisteo	43.7	93	Aug	-12	Jan	44.50
South Kortright	42.8	92	June	-14	Jan	43.89
Turin	40.3	89	Aug	-20	Jan	54.01
Wappingers Falls						51.35
Wedgwood	43.4	96	Aug	-9	Jan	39.95
<i>North Carolina.</i>						
Asheville	54.1	90	July	-9	Jan	46.90
Bakersville	52.6	93	July	-17	Jan	51.04
Blowing Rock	50.5	86	July	-7	Jan	
Bailey						55.93
Chapel Hill	58.9	104	July	-1	Jan	49.06
Columbus	53.6	88	July	0	Jan	86.79
Experimental Farm	59.3	99	July	2	Jan	46.50
Highlands	49.8	85	July	-7	Jan	90.04
Horse Cove	54.0	91	July	-3	Jan	72.61
Lenoir	55.4	92	July	-15	Jan	51.91
Littleton	57.1	100	July	-4	Jan	43.59
Louisburg	58.0	95	July	-5	Jan	46.72
Morganton	56.7	94	July	-1	Jan	
Mount Airy	54.8	95*	July	-15	Jan	45.76
Mount Pleasant	58.0	92	Sept	-4	Jan	50.32
Newbern	58.7	92	July	-6	Jan	54.90
Oak Ridge	56.5	96	July	-5	Jan	53.31
Pittsboro	56.3	95	July	-5	Jan	43.52
Rockingham		102	June	-2	Jan	50.31
Roxboro	58.2	100	July	0	Jan	51.27
Saxon	55.5	100	July	-8	Jan	58.87
Salisbury	59.2	96	July	-6	Jan	47.84
Smithfield	59.3	97	July	-5	Jan	50.22
Soapstone Mount	57.1	99	July	-9	Jan	50.41
Southern Pines	59.5	102	July	-6	Jan	53.59
Weldon	58.4	100	July	-9	Jan	46.87
Willeyton	58.4	97	July	-3	Jan	46.99
<i>North Dakota.</i>						
Ashley	36.5	102*	July	-46	Feb	15.68
Berlin	36.3	102	Aug	-44	Feb	12.02
Bottineau	33.0	106	Aug	-50	Feb	10.30

TABLE II.—Voluntary stations—Continued.

State and station.	Temperature—degrees Fahrenheit.					Precipitation.
	Mean for 1893.	Extremes for 1893.				
		Max.	Month.	Min.	Month.	
North Dakota—Continued.						
Churchs Ferry	33.8	103	Aug	-43	Feb	16.74
Dickinson	38.2	108	July	-47	Jan	11.63
Ellendale	37.6	101	June	-41	Jan	15.77
Fargo	34.9	101	June	-41	Feb	16.11
Forman	38.3	102	Aug	-53	Feb	18.94
Fort Yates	40.5	105	Aug	-31	Feb	16.30
Fort Stevenson	32.4	101	Aug	-48	Jan	14.90
Gallatin	34.2	104	July	-52	Feb	12.67
Grand Forks	34.0	99	June	-44	Feb	17.97
Jamestown	37.2	106	July	-40	Feb	17.93
Kelso	34.9	103	June	-44	Feb	17.78
Minto	33.9	101	June	-43	Feb	17.65
Napoleon	36.6	104	Aug	-44	Feb	18.31
Power	37.1	102	June	-48	Feb	19.02
St. John	37.2	101	June	-44	Feb	22.26
Wahpeton	37.2	101	June	-44	Feb	22.36
Wild Rice	34.4	101	June	-39	Feb	22.36
Willow City	33.0	101	June	-54	Feb	17.01
Woodbridge	30.5	97	Aug	-50	Feb	17.01
Ohio.						
Akron	49.3	95	July	-8	Jan	41.20
Annapolis	46.0	94	June	-14	Jan	40.73
Auburn	48.4	94	Aug	-14	Jan	41.43
Bangorville	48.4	94	Aug	-14	Jan	42.13
Bethany	49.7	100	Aug	-14	Jan	42.28
Benton Ridge	49.7	100	Aug	-14	Jan	33.91
Bissell	49.7	100	Aug	-14	Jan	41.19
Big Prairie	47.4	94	July	-9	Jan	39.00
Cambridge	49.4	93	July	-17	Jan	42.08
Canton	49.4	93	July	-17	Jan	42.80
Carrollton	49.7	98	Aug	-11	Jan	39.88
Celina	51.8	95	July	-12	Jan	34.88
Cherry Fork	49.7	98	Aug	-11	Jan	40.95
Clarksville	51.4	96	July	-16	Jan	47.70
Cleveland	48.7	92	July	-6	Jan	39.06
Coalton	52.8	100	July	-12	Jan	31.84
Colebrook	52.8	100	July	-12	Jan	42.39
Dakota	52.8	97	July	-13	Jan	38.03
Ellsworth	52.8	97	July	-13	Jan	38.99
Elyria	49.1	98	Aug	-8	Jan	33.99
Frankfort	48.4	95	July	-14	Jan	32.76
Frankfort	48.4	95	July	-14	Jan	37.28
Frankfort	48.4	95	July	-14	Jan	40.65
Garrettsville	46.0	95	July	-15	Jan	45.91
Gratiot	50.3	94	July	-17	Jan	39.23
Greenville	49.5	91	July	-17	Jan	41.21
Hackney	49.5	91	July	-17	Jan	43.71
Hanging Rock	52.5	96	July	-20	Jan	44.30
Harbor	47.9	91	July	-8	Jan	40.63
Hillhouse	47.9	91	July	-8	Jan	44.19
Hiram	47.0	94	July	-11	Jan	46.75
Jack-onboro	50.8	98	July	-17	Jan	45.24
Kenton	49.8	98	Aug	-16	Jan	37.35
Killbuck	49.8	98	Aug	-16	Jan	47.35
Levering	49.8	98	Aug	-16	Jan	41.77
Logan	52.2	98	July	-18	Jan	40.95
Lowell	52.2	98	July	-18	Jan	47.52
Lordstown	46.9	94	July	-9	Jan	38.46
Marietta	54.0	94	July	-8	Jan	39.12
Marion	48.8	97	July	-17	Jan	40.49
McConnellsville	51.3	96	July	-17	Jan	37.07
Milligan	50.9	100	June	-24	Jan	40.67
Millfordtown	50.9	100	June	-24	Jan	39.29
Montpelier	47.0	97	Aug	-15	Jan	31.28
New Alexandria	50.5	95	July	-9	Jan	36.26
New Berlin	50.5	95	July	-9	Jan	44.55
New Comerstown	49.0	96	July	-18	Jan	30.29
New Holland	50.6	100	July	-18	Jan	47.86
North Lewisburg	51.0	100	July	-14	Jan	46.77
New Royalston	51.0	100	July	-14	Jan	49.50
Oberlin	48.6	96	Aug	-12	Jan	43.91
Ohio State University	48.6	96	Aug	-12	Jan	37.80
Pataskala	50.5	96	July	-17	Jan	34.73
Pomeroy	50.0	97	July	-15	Jan	43.50
Portsmouth	52.6	100	July	-16	Jan	33.02
Ridgeville Corners	54.0	100	June	-11	Jan	39.11
Sharon Center	54.0	100	June	-11	Jan	35.35
Springboro	54.0	100	June	-11	Jan	34.78
Thurman	54.0	101	July	-18	Jan	44.00
Upper Sandusky	49.8	93	Sept	-15	Jan	33.70
Van Wert	47.6	97	July	-24	Jan	35.37
Vanceburg	47.6	97	July	-24	Jan	33.48
Walnut	47.6	97	July	-24	Jan	41.42
Warren	47.6	97	July	-24	Jan	41.97
Wauseon	47.8	98	July	-10	Jan	42.74
Waverly	47.4	97	Sept	-15	Jan	40.04
Waynesville	53.0	99	July	-17	Jan	48.28
Westerville	49.9	94	July	-17	Jan	40.82
Wheeler	49.9	94	July	-17	Jan	50.88
Wooster	49.3	95	July	-9	Jan	40.58
Youngstown	48.3	97	July	-12	Jan	36.84
Oklahoma.						
Anadarko	61.3	106	June	-6	Jan	21.22
Burnett	60.0	104	Sept	-7	Jan	27.75
Fort Reno	60.2	104	June	4	Jan	20.40
Fort Sill	60.4	105	Sept	5	Jan	24.19
Fort Supply	58.0	111	June	-2	Feb	13.15
Kookuk Falls	57.5	100	June	0	Jan	22.31
Mangum	61.2	106	Sept	9	Feb	11.39
Pennsylvania.						
Aqueduct	50.7	102	July	-10	Jan	45.13

TABLE II.—Voluntary stations—Continued.

State and station.		Temperature—degrees Fahrenheit.				Precipitation.
		Mean for 1893.	Extremes for 1893.			
			Max.	Month.	Min.		Month.
Pennsylvania—Continued.		°	°	°		Inches.
Blooming Grove	45.7	100	June	-14	Jan	44.45
Bloomsburg	49.3	97	Aug	-13	Jan	36.84
Blue Knob	46.4	91	June	-13	Jan	54.51
Brookville	48.8	100	June	-10	Jan	43.59
Carlisle	48.8	100	June	-10	Jan	37.47
Clarion	49.4	98	June	-12	Jan	57.56
Coatesville	49.4	98	June	-12	Jan	49.60
Confluence	48.9	93	June	-5	Jan	43.39
Coopersburg	48.9	93	June	-5	Jan	46.84
Davis Island Dam	48.9	93	June	-5	Jan	36.71
Doylestown	45.4	94	June	-9	Jan	48.55
Drifton	45.4	94	June	-9	Jan	47.97
DuBois	43.3	95	June	-22	Jan	45.11
Dyberry	48.1	99	June	-13	Jan	45.23
East Mauch Chunk	49.0	99	June	-14	Jan	47.94
Easton	49.0	97	June	-14	Jan	44.25
Edinboro	44.9					
Emporium	47.3	93	June	-16	Jan	42.92
Forks of Neshaminy	50.5					46.64
Frederick						43.15
Freeport						43.55
Gettysburg						39.95
Girardville	47.9	94	June	-4	Jan	52.92
Grampian	45.8	94	June	-16	Jan	45.11
Greensboro						33.76
Hollidaysburg	49.2	98	June	-20	Jan	39.46
Honesdale	45.0	89	June	-19	Jan	41.55
Huntingdon	49.2	99	July	-13	Jan	45.21
Johnstown						42.05
Kennett Square	49.6					44.11
Kilmer	51.0	100	July	-6	Jan	42.80
Lansdale						43.41
Lebanon	49.3	98	June	-10	Jan	45.81
Le Roy	45.5	96	Aug	-10	Jan	42.95
Lock Haven	48.3	100	June	-10	Jan	38.31
Lock No. 4						36.96
Lycippus						41.87
Mahoning						51.38
New Castle	49.8	96	July	-12	Jan	42.80
Oil City						49.97
Ottaville						46.51
Parkers Landing						52.50
Philadelphia	53.2	98	June	0	Jan	45.23
Phoenixville	51.6	98	July	-12	Jan	43.92
Point Pleasant						52.35
Pottstown	51.7	98	June	-11	Jan	47.99
Quakerstown	48.2	102	July	-14	Jan	52.63
Reading						38.68
Ridgway						39.29
Saegertown	45.5	94	Aug	-25	Jan	51.60
Salem Corners	44.2	92	June	-10	Jan	49.35
Saltsburg						35.00
Seisholtzville						44.80
Selins Grove	49.9	99	June	-12	Jan	46.56
Smithport	44.2	91	June	-15	Jan	
Smiths Corners						51.55
Somerset	46.9	96	Aug	-14	Jan	45.00
South Eaton	40.8	91	June	-18	Jan	40.57
State College	47.4	92	June	-7	Jan	43.21
Stoyestown						47.91
Warren						48.71
Wellsboro	42.7	92	June	-16	Jan	49.15
West Chester	50.9	95	June	-4	Jan	43.19
West Newton						37.93
Wilkesbarre	49.5	97	Aug	-8	Jan	42.36
York	50.5	98	June	-14	Jan	37.03
South Carolina.						
Camden						45.11
Cheraw a	61.5	104	July	3	Jan	48.09
Cheraw b						55.55
Effingham						53.81
Greenville						50.34
Longshore	62.3	103	July	8	Jan	50.84
Mount Carmel						44.38
Nichols						47.40
Port Royal	66.6	99	July	20	Jan	57.01
St. Stephens						70.02
Society Hill	61.9	97	July	8	Jan	59.82
Statesburg	62.3	98	July	13	Jan	52.15
Tillers Ferry						53.93
Trial	65.2	97	July	9	Jan	62.99
Wateree						58.44
Yorkville	61.0	97	July	7	Jan	
South Dakota.						
Aberdeen	39.6	104	June	-42	Feb	21.96
Alexandria	43.4	106	Sept	-27	Feb	26.90
Ashcroft	41.4	106	July	-44	Jan	13.64
Bowdle	40.2	98	July	-38	Feb	16.77
Brookings	42.1					14.68
Bear Valley	43.6					
Castlewold	37.7	102	July	-36	Feb	16.23
Cross	42.2	96	June	-25	Feb	13.50
De Smet	41.7	106	July	-35	Feb	14.04
Faulkton	40.4	102	July	-35	Feb	23.23
Flandreau	41.1	100	July	-29	Feb	20.26
Forestburg	42.4	102	Sept	-30	Feb	15.85
Frankfort	40.5	105	July	-35	Feb	18.50
Fort Meade	45.9	105	June	-30	Jan	18.08
Fort Sully	45.8	104	June	-32	Feb	24.05
Gary	40.2					20.71
Hotch City	43.9	107	July	-29	Feb	14.02

TABLE II.—Voluntary stations—Continued.

State and station.	Temperature—degrees Fahrenheit.					Precipitation.
	Mean for 1893.	Extremes for 1893.				
		Max.	Month.	Min.	Month.	
<i>South Dakota—Continued.</i>						
Howard	41.3	o		o		18.30
Kimball	43.3	104	July			17.78
Mellette	42.3					19.42
Oelrichs	46.6	110	June	-30	Feb	15.82
Parker	42.6	101	July	-27	Feb	22.01
Parkston	46.0					17.38
Rosebud	42.6					22.33
Sioux Falls	42.5					22.85
Spearsfish	45.9	105	June	-30*	Jan	19.31
Tyndall	46.0					16.05
Watertown	42.6	105	July	-42	Feb	27.91
Webster	37.8					14.40
Wentworth	44.0	106	July	-26	Feb	20.07
Wessington Springs	40.6					18.33
Wolsey						
<i>Tennessee.</i>						
Andersonville	55.4	94	July	-14	Jan	38.32
Ashwood	58.3	95	July	1	Jan	57.62
Carthage						47.21
Clarksville						48.44
Covington	59.7	98	June	4	Jan	47.27
Florence Station	58.0	95	July	0	Jan	43.81
Franklin	58.0	98	July	-4	Jan	44.55
Greenville	54.8	90	July	-20	Jan	48.68
Jacksboro	53.5	92	July	-10	Jan	47.50
Jackson	58.7	99	July	-3	Jan	
Lynnville		97	July	5	Jan	52.84
Nunnally	58.0	97	July	-5	Jan	47.01
Parksville		95	July	4	Jan	
Rogersville	54.9	92	July	-13	Jan	46.55
Rugby	54.1	95	July	-9	Jan	45.87
Savannah	60.4	96	July	-4	Jan	44.04
Waynesboro	56.2	98	July	-2	Jan	47.78
<i>Texas.</i>						
Albany	64.8	103	Sept	14	Feb	18.98
Arlington	66.4	106	Sept	16	Feb	25.43
Arthur City						24.92
Aurora						15.00
Boerne	64.3			22	Jan	16.96
Brady	66.1	101	May	6	Jan	8.83
Brazoria	69.1	98	July	26	Jan	28.80
Brenham	70.4	102	Sept	27	Jan	28.30
Brownwood	66.7	104	May	16*	Jan	11.92
Burnet	67.6	96*	July	22	Jan	21.19
Camp Eagle Pass	71.4	109	Sept	22	Jan	7.13
Childress	60.0	107	June	6	Feb	19.08
Coldwater						16.31
College Station	69.2	107	Aug	25	Jan	29.73
Columbia	70.0	98*	July	27	Jan	19.41
Cuero	70.9	102*	July	26	Feb	23.83
Dallas	64.6	104	Sept	15	Feb	28.93
Devine						15.58
Duval	69.4	107	Aug	24	Jan	15.80
Eastland	64.2	105	July	12	Feb	16.21
Flower Bluff	72.7	94*	Apr	32	Dec	16.95
Forestburg	63.2	104	July	14*	Jan	19.92
Fort Brown				27	Jan	14.36
Fort Clark	71.1	107	Sept	23	Jan	6.45
Fort Hancock	59.8	110	June	3	Jan	14.86
Fort McIntosh	73.4	105	May	24	Jan	8.65
Fort Ringgold	73.7	112	June	26	Jan	17.51
Fredericksburg	62.2	102	Sept	22	Jan	16.22
Gainesville						22.48
Graham	65.3	107	July	12	Feb	21.88
Grapevine	66.5	106*	July	15*	Jan	22.57
Hallettsville	67.5	104	Sept	21	Jan	20.61
Hartley	55.9	106	July	3	Feb	10.91
Highland	66.5	110	Aug	13*	Jan	14.56
Houston	69.8	99	Sept	29	Jan	29.03
Huntsville	69.9	100	Aug	26	Jan	32.65
Llano						11.11
McGregor	56.2	96*	June	18	Feb	20.87
Menardville	64.7	101	May	14	Jan	8.51
Mountain Spring	64.8	105	Sept	14	Feb	20.24
Paris						33.70
Rockport	69.5	96*	July	30	Jan	
Round Rock		105	July	20	Jan	
Sherman		100	July			
Sierra Blanca		103	June	14*	Jan	
Silver Falls	62.3	108	June	10	Jan	
Stella		95	Sept			
Sulphur Springs	65.1	110	Aug	12	Jan	27.60
Temple	65.8	100	Sept	19	Feb	22.08
Waco	67.3	102	Sept	19	Feb	22.13
<i>Utah.</i>						
Castle Gate	47.5	100	July	1	Feb	9.90
Cisco	52.0	104*	July	-10	Jan	7.35
Deseret	47.8	99	July	-12	Jan	7.66
Fillmore	51.2	106	July	-5	Jan	15.59
Fort Du Chene						9.02
Grouse Creek	40.1	96	Aug	-17	Jan	11.50
Heber City	42.2	96	Aug	-12	Jan	17.84
Lake Park	48.4	98	July	5	Jan	15.51
Levan	46.0	86	July	-5	Jan	15.75
Loa	43.4	96	July	-13	Feb	7.92
Losoe	46.9	95	July	-5	Dec	12.45
Moab	53.5	103	June	-2	Jan	8.25
Parowan	48.2	99	Aug	5*	Jan	12.80
St. George	59.0	112	Aug	14	Jan	6.73
Scofield	37.1	88	July	-32	Feb	16.08
Snowville	43.7	98*	July	-7	Jan	10.96

TABLE II.—Voluntary stations—Continued.

State and station.	Temperature—degrees Fahrenheit.					Precipitation.
	Mean for 1893.	Extremes for 1893.				
		Max.	Month.	Min.	Month.	
<i>Virginia.</i>						
Alexandria	96	June				
Ashland	96.9*	96	July	-16	Jan	51.60
Avon	97	June	-15	Jan		
Bedford City	95	July	-1	Jan		47.27
Big Stone Gap	93	July	-26	Jan		52.74
Birdsnest	93	July	2	Jan		50.28
Blacksburg	92	July	-3	Jan		50.28
Cape Charles	98	July	3	Jan		55.09
Charlottesville			-1	Jan		
Dale Enterprise	96	July	-16	Jan		40.30
Fredericksburg	100	July				
Hampton	97	July				
Hot Springs	89	July	-11	Jan		39.81
Irwin	95	July	-14	Jan		54.34
Lexington	98	July	-11	Jan		42.56
<i>Washington.</i>						
Aberdeen	49.2	93	Aug	10	Jan	88.13
Colfax	45.5	94*	July	-17	Feb	28.47
East Sound	48.7	84*	July	-6	Jan	38.31
Terry						69.36
Fort Spokane	45.2	102	Aug	-29	Feb	
Fort Townsend	47.9	85	Aug	-3	Jan	27.94
Madrone	48.5	86	Aug	0	Jan	51.30
Moxee Valley		101	July			10.91
Olga	47.3	80	June	-3	Jan	36.60
Pullman	45.1	98	July	-15	Jan	22.18
Rosalia	43.8	96	July	-20	Feb	21.76
Silver Creek	48.4	98	Aug	22	Feb	65.86
Simcoe	47.1					
Tacoma	48.7	90	Aug	-5	Jan	48.09
Waterville	42.7	97*	July	-30	Jan	15.74
<i>West Virginia.</i>						
Bluefield	50.8	90*	July	-8	Jan	52.52
Buckhannon		91	July	-18	Jan	
Central	55.5	96	July	-18	Jan	46.04
Davis		88	June			
Elkhorn	53.8	92	July	-14	Jan	47.42
Ella	50.5	95	July	-6	Jan	
Glenville	51.9	93	July	-18	Jan	41.86
Grafton	52.0	95	Aug	-8	Jan	37.93
Huntington						
Kingwood		93	Aug	-19	Jan	
Martinsburg	51.6	97	Aug	-2	Jan	38.11
Morgantown		105	Aug	-4	Jan	
New Cumberland		98	July	-6	Jan	
New Martinsville	52.3	98	Aug	-12	Jan	42.69
Nuttallburg						
Pleasant Hill	48.0	91	Aug	-8	Jan	
Point Pleasant		96	July	-14	Jan	41.45
Spencer		98	June	-25	Jan	
Tannery	50.9	95	July	-10	Jan	
Weston		92	July			
Wheeling	54.4	97	July	-3	Jan	42.22
<i>Wisconsin.</i>						
Amherst	40.3	96	July	-29	Jan	32.40
Baraboo	43.3	97	Aug	-24	Feb	35.91
Barron	38.5	97*	July	-38	Jan	
Beaver Dam	43.9	92	July	-20	Feb	30.86
Beloit	45.1	95	Aug	-20*	Jan	32.53
Black River Falls	40.9	99	July	-36	Jan	28.30
Centuria	41.2	97	June	-33	Jan	22.00
Chippewa Falls						21.85
Columbus	43.2	96	Aug	-25	Feb	
Crandon		100	June			
Delavan	45.9	96*	Aug	-24	Jan	27.92
Eau Claire	40.7	97	July	-29	Jan	33.71
Florence	38.2	96	July	-32	Jan	32.00
Fond du Lac	41.5	94*	July	-29	Jan	29.73
Grantsburg	39.5	97	June	-27	Feb	22.99
Harvey	43.0	97	Aug	-23	Feb	29.71
Hillsboro	40.9	93	July	-32	Jan	31.66
Janesville	43.6	92*	July	-16*	Jan	24.81
Koepenick	41.8	96	June	-26	Jan	29.65
Lancaster	42.3	94*	July	-24	Feb	29.74
Madison	43.5	92	June	-21	Feb	31.43
Manitowoc	40.5	92	July	-21	Feb	30.95
Medford a						30.07
Medford b	38.9	97	July	-32	Jan	26.61
Menominee	38.5	101	July	-37	Jan	33.47
Neillsville	39.9	94*	June	-36	Jan	30.21
Oconomowoc	44.1	95	Aug	-27	Jan	29.12
Oconto	41.8	95	July	-24	Jan	23.37
Oscoda	40.2	104	July	-40	Jan	28.31
Portage						35.40
Prairie du Chien	44.3	98	July	-26*	Jan	29.45
Raymond	43.0	96	Aug	-19	Feb	35.22
Reedsburg	41.8	92*	June	-32	Jan	27.28
Sharon	43.2	96	Aug	-18	Jan	32.89
Shawano	41.0	96	July	-28	Jan	23.11
Sparta	41.7	95	June	-39	Jan	31.64
Valley Junction	40.0	92*	June	-37	Jan	28.79
Viroqua	42.0	92	July	-26	Feb	28.75
Watertown	42.1	93*	July	-28	Jan	28.48
Waukesha						31.38
Westfield	41.9	94	July	-26	Feb	32.54
Weston	39.5	99*	July	-22	Jan	33.57
<i>Wyoming.</i>						
Camp Pilot Butte	42.7	98	July	-16	Feb	9.31
Fort McKinney	45.1	100	July	-34	Jan	8.40
Fort Washakie	43.0	97	July	-14	Nov	8.22
Fort Yellowstone						15.12

TABLE II.—Voluntary stations—Continued.

State and station.	Temperature—degrees Fahrenheit.					Precipitation.
	Mean for 1893.	Extremes for 1893.				
		Max.	Month.	Min.	Month.	
<i>Wyoming—Continued.</i>	°	°		°		<i>Inches.</i>
Lander	44.2	94	July	-10	Feb	11.67
Laramie	40.7	87	July	-9	Feb	3.84
Saratoga	39.6	89	July	-13*	Jan	15.04
Wheatland	48.8	108	June	-15	Jan	5.92

NOTE.—Bold face figures indicate that a portion of the year's record (not more than three months in any case) has been supplied by interpolation by the Records Division.
* Occurred in other months also.

TABLE III.—Canadian stations.

Stations.	Reduced pressure.	Temperature.	Total precipitation.
	<i>Inches.</i>	°	<i>Inches.</i>
Halifax, N. S.	29.97	42.2	58.42
Grand Manan, N. S.	29.96	42.1	44.07
Yarmouth, N. S.	29.98	42.2	54.13

TABLE III.—Canadian stations—Continued.

Stations.	Reduced pressure.	Temperature.	Total precipitation.
	<i>Inches.</i>	°	<i>Inches.</i>
St. Andrews, N. B.	29.94	40.3	36.51
Charlottetown, P. E. I.	29.93	40.8	42.39
Chatham, N. B.	29.93	37.3	39.66
Quebec, Que.	29.97	36.9	35.91
Rockliffe, Ont.	29.96	34.6	34.28
Kingston, Ont.	29.99	41.6	36.56
Toronto, Ont.	30.00	42.6	39.66
White River, Ont.	30.01	30.8	22.90
Port Stanley, Ont.	30.01	43.3	40.94
Saugeen, Ont.	30.00	41.3	35.18
Parry Sound, Ont.	29.98	38.3	48.03
Port Arthur, Ont.	29.95	32.1	23.15
Winnipeg, Man.	29.98	29.6	23.93
Minnedosa, Man.	29.94	29.7	13.35
Qu'Appelle, Assiniboia	29.97	29.8	16.35
Medicine Hat, Assiniboia.	29.94	37.2	14.60
Swift Current, Assiniboia.	29.98	33.8	14.54
Spences Bridge, B. C.	29.98	45.1	9.33
Edmonton, Alberta	29.96	33.0	17.87
Battleford, Saskatchewan	29.95	29.1	10.93
Prince Albert, Saskatchewan	29.94	27.0	10.53
Hamilton, Bermuda	30.11	69.3	62.94

TABLE IV.—*Resultant winds from observations at 8 a. m. and 8 p. m., daily, during the year 1893.*

Number.	Station.	Component direction from—				Resultant.		Number.	Station.	Component direction from—				Resultant.	
		N.	S.	E.	W.	Direction from—	Duration.			N.	S.	E.	W.	Direction from—	Duration.
New England.															
1	Eastport, Me.	247	208	111	344	n. 80 w.	236	72	Milwaukee, Wis.	220	220	185	286	... w.	101
2	Portland, Me.	224	233	116	312	s. 87 w.	196	73	Green Bay, Wis.	214	310	131	227	s. 45 w.	138
3	Northfield, Vt.	233	393	65	114	s. 17 w.	167	74	Duluth, Minn.	302	73	242	264	n. 5 w.	236
4	Boston, Mass.	207	190	126	364	n. 86 w.	239		North Dakota.						
5	Nantucket, Mass.	274	188	163	287	n. 55 w.	151	75	Moorhead, Minn.	297	241	125	194	n. 49 w.	94
6	Woods Holl, Mass.	95	119	79	166	s. 74 w.	90	76	Saint Vincent, Minn.	269	205	175	196	n. 18 w.	67
7	Block Island, R. I.	245	188	188	329	n. 68 w.	152	77	Bismarck, N. Dak.	303	166	201	236	n. 15 w.	161
8	New Haven, Conn.	317	187	154	242	n. 34 w.	157	78	Williston, N. Dak.	212	163	212	273	n. 51 w.	79
9	New London, Conn.	297	177	146	333	n. 57 w.	222		Upper Mississippi Valley.						
Middle Atlantic States.															
10	Albany, N. Y.	140	292	103	223	s. 39 w.	193	80	Saint Paul, Minn.	164	259	223	294	s. 37 w.	119
11	New York, N. Y.	249	252	177	271	s. 88 w.	94	81	La Crosse, Wis.	201	275	135	243	s. 56 w.	131
12	Harrisburg, Pa.	218	133	229	277	n. 20 w.	98	82	Davenport, Iowa.	147	200	214	311	s. 62 w.	111
13	Philadelphia, Pa.	264	193	183	269	n. 50 w.	109	83	Des Moines, Iowa.	232	197	211	254	n. 52 w.	53
14	Atlantic City, N. J.	229	217	175	275	n. 83 w.	101	84	Dubuque, Iowa.	188	239	199	280	s. 57 w.	96
15	Baltimore, Md.	235	188	202	264	n. 48 w.	84	85	Keokuk, Iowa.	215	236	177	283	s. 79 w.	105
16	Washington, D. C.	266	225	164	221	n. 53 w.	70	86	Cairo, Ill.	234	280	152	196	s. 42 w.	64
17	Lynchburg, Va.	230	187	234	269	n. 32 w.	64	87	Springfield, Ill.	231	252	137	262	s. 81 w.	127
18	Norfolk, Va.	255	220	234	205	n. 41 e.	45	88	Hannibal, Mo.	214	230	164	267	s. 81 w.	104
South Atlantic States.															
19	Charlotte, N. C.	179	275	244	206	s. 22 w.	103	90	Saint Louis, Mo.	209	273	192	218	s. 22 w.	66
20	Hatteras, N. C.	251	215	182	211	n. 39 w.	46	91	Kansas City, Mo.	230	280	237	170	s. 52 e.	84
21	Kittyhawk, N. C.	249	221	214	238	n. 41 w.	37	92	Springfield, Mo.	181	309	256	148	s. 40 e.	168
22	Raleigh, N. C.	246	185	127	313	n. 74 w.	194	94	Omaha, Nebr.	249	265	185	183	s. 7 e.	161
23	Southport, N. C.	240	189	201	267	n. 49 w.	87	95	Sioux City, Iowa.	275	260	202	141	n. 76 e.	63
24	Wilmington, N. C.	233	243	196	247	s. 79 w.	52	96	Pierre, S. Dak.	147	162	259	230	s. 62 e.	33
25	Charleston, S. C.	203	234	218	247	s. 43 w.	42	97	Huron, S. Dak.	271	218	214	224	n. 10 w.	54
26	Augusta, Ga.	232	224	216	202	n. 60 w.	16		Yankton, S. Dak.	255	215	228	249	n. 27 w.	45
27	Savannah, Ga.	208	269	203	229	s. 23 w.	66	98	Northern Slope.						
28	Jacksonville, Fla.	251	239	204	301	n. 14 e.	12	99	Havre, Mont.	232	137	165	364	n. 64 w.	221
Florida Peninsula.															
29	Jupiter, Fla.	190	261	253	188	s. 42 e.	95	100	Miles City, Mont.	222	190	197	265	n. 69 w.	73
30	Key West, Fla.	209	164	426	83	n. 82 e.	346	101	Helena, Mont.	97	318	52	460	s. 62 w.	404
31	Tampa, Fla.	259	181	275	182	n. 51 e.	123	103	Rapid City, S. Dak.	240	185	127	313	n. 73 w.	194
32	Titusville, Fla.	216	230	238	227	s. 38 e.	18	104	Cheyenne, Wyo.	271	162	79	365	n. 69 w.	306
33	Atlanta, Ga.	231	193	221	281	n. 58 w.	71	105	Lander, Wyo.	145	227	121	359	s. 71 w.	252
34	Pensacola, Fla.	255	260	174	200	s. 79 w.	26	106	Kearney, Nebr.	252	242	195	235	n. 76 w.	423
35	Mobile, Ala.	316	233	113	204	n. 48 w.	143	107	North Platte, Nebr.	195	253	169	185	s. 16 w.	60
36	Montgomery, Ala.	135	206	220	200	s. 16 e.	74	108	Middle Slope.						
37	Meridian, Miss.	258	246	211	164	n. 76 e.	49	109	Colorado Springs, Colo.	309	172	138	131	n. 2 e.	227
38	Vicksburg, Miss.	217	269	210	163	s. 43 e.	70	110	Denver, Colo.	223	279	162	232	s. 51 w.	90
39	New Orleans, La.	236	255	266	130	s. 82 e.	137	111	Pikes Peak, Colo.	214	172	95	410	n. 82 w.	318
40	Shreveport, La.	179	341	234	126	s. 35 e.	194	112	Pueblo, Colo.	249	112	215	295	n. 65 w.	88
41	Fort Smith, Ark.	150	167	380	134	s. 86 e.	247	113	Concordia, Kans.	211	293	170	177	s. 5 w.	83
42	Little Rock, Ark.	192	254	212	235	s. 20 w.	66	114	Dodge City, Kans.	241	265	275	146	s. 80 w.	131
43	Corpus Christi, Tex.	197	298	366	73	s. 71 e.	310	115	Wichita, Kans.	235	335	186	171	s. 53 e.	125
44	Galveston, Tex.	162	346	277	25	s. 40 e.	239	116	Oklahoma, Okla.	215	347	203	127	s. 30 e.	152
45	Palestine, Tex.	234	279	203	170	s. 36 e.	56		Southern Slope.						
46	San Antonio, Tex.	179	253	263	78	s. 49 e.	112	117	Abilene, Tex.	173	389	182	120	s. 16 e.	225
Ohio Valley and Tennessee.															
47	Chattanooga, Tenn.	230	243	160	256	s. 83 w.	97	118	Amarillo, Tex.	180	389	103	151	s. 13 w.	214
48	Knoxville, Tenn.	250	138	233	252	n. 12 w.	94	119	El Paso, Tex.	242	72	241	324	n. 25 w.	189
49	Memphis, Tenn.	251	256	161	208	s. 84 w.	97	120	San Fe, N. Mex.	216	262	277	185	s. 63 e.	103
50	Nashville, Tenn.	252	252	175	214	... w.	39	121	Tucson, Ariz.	207	301	203	237	s. 19 w.	100
51	Lexington, Ky.	194	293	184	302	s. 50 w.	154	122	Yuma, Ariz.	247	186	163	267	n. 60 w.	121
52	Louisville, Ky.	217	277	167	239	s. 50 w.	94	123	Keeler, Cal.	207	208	163	255	... w.	92
53	Indianapolis, Ind.	204	248	198	181	s. 21 e.	47	124	Middle Plateau.						
54	Cincinnati, Ohio	196	250	258	249	s. 9 e.	55	125	Winnemucca, Nev.	177	224	184	304	s. 68 w.	129
55	Columbus, Ohio	207	229	198	251	s. 67 w.	66	126	Salt Lake City, Utah.	211	199	247	339	n. 34 e.	150
56	Pittsburg, Pa.	228	205	184	285	n. 76 w.	103	127	Northern Plateau.						
57	Parkersburg, W. Va.	182	272	189	219	s. 18 w.	100	128	Baker City, Oreg.	188	361	192	180	s. 4 e.	173
Lower Lake Region.															
58	Buffalo, N. Y.	186	250	161	331	s. 69 w.	182	129	Idaho Falls, Idaho.	218	145	62	274	n. 72 w.	224
59	Oswego, N. Y.	160	316	162	267	s. 35 w.	188	130	Spokane, Wash.	138	383	174	163	s. 2 e.	245
60	Rochester, N. Y.	127	325	150	347	s. 45 w.	279	131	Walla Walla, Wash.	87	158	120	484	s. 79 w.	371
61	Errie, Pa.	145	300	148	304	s. 45 w.	220	132	Fort Canby, Wash.	229	250	174	210	s. 60 w.	41
62	Cleveland, Ohio	172	298	243	238	s. 2 e.	126	133	Olympia, Wash.	149	329	93	219	s. 40 w.	196
63	Sandusky, Ohio	143	233	205	296	s. 45 w.	128		Port Angeles, Wash.	72	353	132	276	s. 27 w.	316
64	Toledo, Ohio	206	215	177	309	s. 86 w.	132	134	Tatoosh Island, Wash.	44	282	261	274	s. 3 w.	238
65	Detroit, Mich.	177	146	210	308	n. 72 w.	103	135	Portland, Oreg.	293	269	92	233	n. 80 w.	143
Upper Lake Region.															
66	Alpena, Mich.	198	219	186	289	s. 79 w.	105	137	Roseburg, Oreg.	252	196	188	258	n. 50 w.	90
67	Grand Haven, Mich.	175	211	218	295	s. 66 w.	85		Middle Pacific Coast Region.						
68	Marquette, Mich.	246	217	122	309	n. 82 w.	189	138	Eureka, Cal.	283	225	105	228	n. 65 w.	136
69	Port Huron, Mich.	204	286	165	253	s. 47 w.	120	139	Red Bluff, Cal.	268	239	193	256	n. 66 w.	69
70	Sault Ste. Marie, Mich.	215	231	283	231	s. 73 e.	54	140	Sacramento, Cal.	167	302	148	196	s. 19 w.	143
71	Chicago, Ill.	199	257	206	267	s. 46 w.	84		San Francisco, Cal.	81	367	77	375	s. 74 w.	310
South Pacific Coast Region.															
72	Fresno, Cal.	364	92	131	377	n. 42 w.	367		Fresno, Cal.	364	92	131	377	n. 42 w.	367
73	Los Angeles, Cal.	221	90	210	354	n. 47 w.	194		Los Angeles, Cal.	221	90	210	354	n. 47 w.	194
74	San Diego, Cal.	209	149	85	420	n. 80 w.	340		San Diego, Cal.	209	149	85	420	n. 80 w.	340

NOTE.—Stations whose records cover only a part of the year are omitted.—C. A.

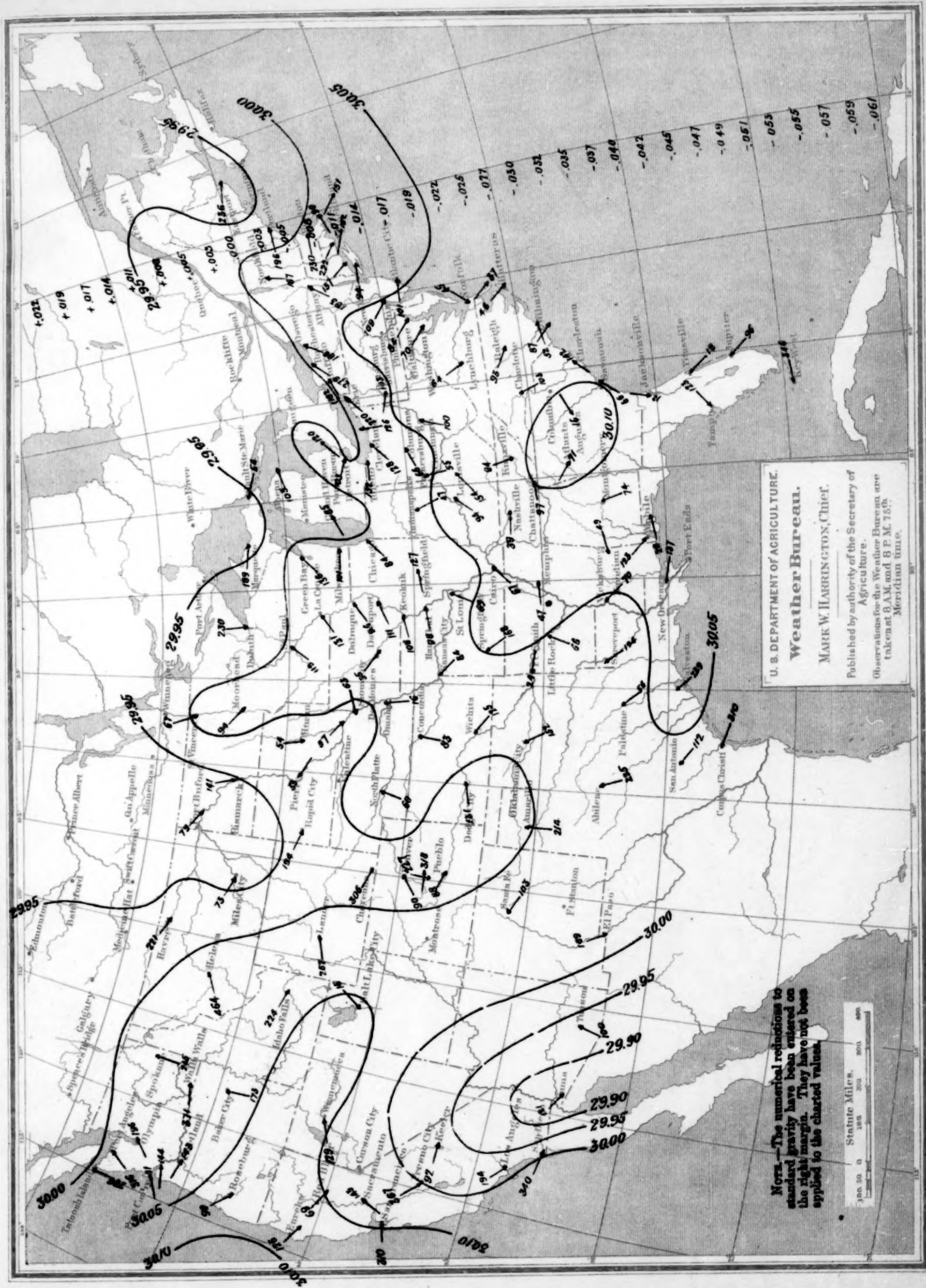
TABLE V.—Accumulated departures of average monthly temperatures during 1893.

Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual average.
New England	-7.1	-9.7	-10.7	-12.3	-12.7	-12.9	-13.4	-12.7	-15.5	-13.5	-13.9	-16.1	-1.34
Middle Atlantic States	-9.0	-11.1	-12.1	-11.2	-12.1	-11.5	-11.4	-10.4	-12.0	-12.0	-14.1	-13.6	-1.13
South Atlantic States	-8.2	-7.9	-9.1	-5.5	-6.5	-7.3	-6.7	-7.4	-6.3	-6.6	-7.8	-6.1	-0.51
Key West, Fla.	-6.3	-6.2	-5.5	-3.9	-3.9	-5.1	-6.1	-6.4	-6.0	-5.8	-5.4	-4.9	-0.41
East Gulf States	-4.3	-3.3	-5.0	-2.5	-3.0	-3.5	-2.9	-2.6	-1.5	-3.3	-4.7	-2.9	-0.24
West Gulf States	+1.4	-0.4	-1.7	+1.1	+0.2	-0.4	-0.6	-1.2	+1.2	+0.5	-1.2	+2.0	+0.17
Ohio Valley and Tennessee	-7.0	-8.7	-9.0	-7.2	-9.5	-9.3	-7.9	-7.3	-5.9	-6.5	-8.8	-8.7	-0.72
Lower Lake region	-8.1	-11.6	-11.2	-11.6	-13.2	-10.0	-9.9	-9.1	-9.9	-8.2	-9.6	-12.0	-1.00
Upper Lake region	-6.2	-10.2	-10.1	-11.9	-13.9	-10.3	-9.5	-9.0	-9.0	-7.4	-8.1	-12.4	-1.03
Extreme northwest	+1.4	-4.6	-12.0	-19.3	-20.7	-18.1	-17.8	-16.9	-14.7	-15.9	-18.4	-25.6	-2.13
Upper Mississippi Valley	-7.1	-12.8	-14.3	-16.9	-19.6	-17.3	-16.2	-16.2	-13.7	-12.1	-14.6	-17.5	-1.46
Missouri Valley	+0.5	-3.5	-6.3	-9.1	-12.1	-10.7	-10.4	-11.2	-7.6	-6.6	-9.2	-9.5	-0.79
Northern slope	+8.0	+2.2	-2.9	-8.5	-10.1	-10.4	-9.6	-9.9	-9.2	-10.7	-13.4	-10.4	-0.87
Middle slope	+9.2	+7.7	+2.4	+5.4	+2.8	+4.3	+4.7	+3.6	+5.9	+6.5	+4.7	+8.1	+0.68
Southern slope	+5.0	+2.9	+2.7	+7.5	+8.5	+12.2	+13.8	+13.6	+16.6	+17.4	+14.5	+18.8	+1.57
Southern plateau	+3.9	+4.1	+1.1	-0.1	-2.0	-0.2	-2.0	-3.1	-4.4	-5.8	-7.6	-7.0	-0.58
Middle plateau	+1.4	-6.2	-9.6	-13.9	-16.4	-16.5	-16.3	-17.0	-18.2	-17.6	-18.3	-15.9	-1.32
Northern plateau	+0.8	-4.9	-7.6	-13.6	-18.0	-23.0	-25.4	-25.6	-26.5	-29.9	-31.9	-30.1	-2.51
North Pacific	-1.7	-4.5	-6.5	-10.9	-13.3	-16.5	-17.6	-17.6	-19.6	-22.9	-25.6	-24.4	-2.03
Middle Pacific	-2.4	-4.1	-7.5	-11.4	-13.3	-14.8	-15.4	-16.4	-19.2	-20.7	-20.5	-20.1	-1.68
South Pacific	+4.0	+3.7	+0.1	-1.9	-2.6	-3.9	-4.8	-5.2	-9.9	-12.1	-14.4	-12.9	-1.08

TABLE VI.—Accumulated departures of total monthly precipitations during 1893.

Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual sum.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
New England	-1.6	-0.2	-0.4	0.0	+1.3	+0.5	-1.4	-0.7	-1.8	-3.1	-5.0	-3.6	-3.6
Middle Atlantic States	-1.5	-0.2	-1.5	-1.4	0.0	0.0	-1.4	-1.5	-1.3	-1.1	-0.7	-1.3	-1.3
South Atlantic States	-1.8	-0.9	-1.8	-3.9	-3.5	-1.8	-4.1	-1.9	-2.5	-1.7	-2.3	-2.9	-2.9
Key West, Fla.	+0.8	0.0	-1.2	-2.0	-3.2	-4.6	-5.9	-8.8	-13.9	-15.4	-17.5	-18.2	-18.2
East Gulf States	-2.5	-2.7	-5.5	-7.3	-6.2	-6.8	-8.3	-8.8	-8.4	-8.1	-8.9	-11.2	-11.2
West Gulf States	-2.9	-4.3	-5.5	-5.5	-4.3	-3.4	-4.9	-6.0	-8.9	-11.6	-11.7	-13.9	-13.9
Ohio Valley and Tennessee	-2.3	-0.8	-3.0	-0.8	+1.6	+1.3	-0.3	-0.5	-0.5	-0.7	-2.0	-2.9	-2.9
Lower Lake region	-0.9	0.0	-1.0	+0.4	+1.6	+0.3	-1.0	-0.5	-2.0	-1.8	-2.5	-2.1	-2.1
Upper Lake region	+0.1	+0.2	+0.3	+1.7	+1.1	+0.1	+0.1	-1.6	-3.0	-3.4	-3.7	-2.6	-2.6
Extreme northwest	+0.4	+0.3	+0.7	+0.8	+0.8	+1.2	+0.4	-0.1	-0.9	-1.5	-1.6	-1.0	-1.0
Upper Mississippi Valley	-1.1	-0.0	-0.6	+2.9	+3.0	+1.8	+0.5	-1.5	-2.0	-3.3	-3.8	-4.4	-4.4
Missouri Valley	-0.6	-0.7	-0.1	+1.3	+0.3	-0.3	-0.3	-1.7	-1.9	-3.6	-4.2	-4.5	-4.5
Northern slope	0.0	0.0	0.0	-0.3	-0.5	-1.6	-2.3	-2.6	-2.5	-2.5	-2.4	-2.5	-2.5
Middle slope	-0.6	-0.7	-1.6	-3.4	-4.5	-4.9	-4.8	-5.9	-6.3	-7.0	-7.2	-7.5	-7.5
Southern slope	-0.2	-0.2	-1.2	-3.6	-3.0	-4.6	-5.0	-3.8	-3.5	-5.7	-7.4	-8.1	-8.1
Southern plateau	-0.2	-0.2	+0.2	-0.1	+0.5	+0.1	+0.1	+1.2	+1.5	+0.9	+0.6	+0.4	+0.4
Middle plateau	+0.2	+0.9	+1.4	+1.3	+1.0	+0.5	+0.6	+0.8	+1.1	+0.6	+0.5	+0.3	+0.3
Northern plateau	-1.8	-1.0	-0.3	-2.3	-3.5	-2.3	-2.0	-1.6	-2.8	-4.0	-5.3	-4.2	-4.2
North Pacific	-5.0	-2.6	-1.1	-4.2	-5.5	-6.3	-5.7	-5.0	-5.4	-6.6	-10.8	-10.1	-10.1
Middle Pacific	-2.3	-2.9	-0.8	-0.9	-1.3	-1.9	-1.9	-1.9	-1.3	-1.5	+1.2	-1.2	-1.2
South Pacific	+1.0	-0.5	+4.3	+3.3	+3.1	+3.0	+3.0	+2.9	+2.8	+2.4	+1.7	+1.2	+1.2

Chart II.—Mean Annual Pressure and Resultant Wind Direction for 1893.



U. S. DEPARTMENT OF AGRICULTURE.
Weather Bureau.
 MARK W. HARRINGTON, Chief.
 Published by authority of the Secretary of Agriculture.
 Observations for the Weather Bureau are taken at 8 A.M. and 8 P.M. 75th Meridian time.

Chart III.—Temperature Annual Mean and Departure from the Normal for 1893.

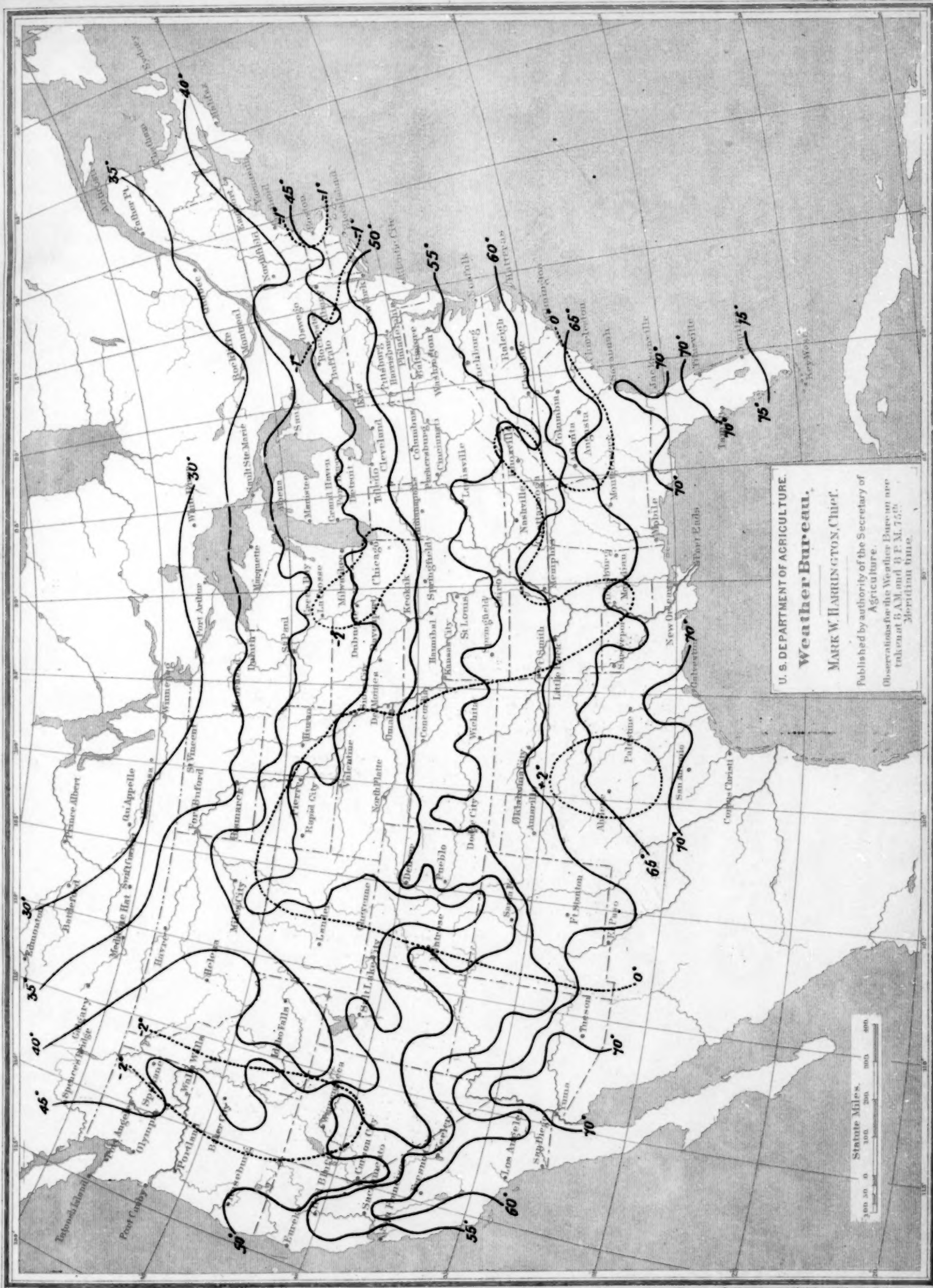
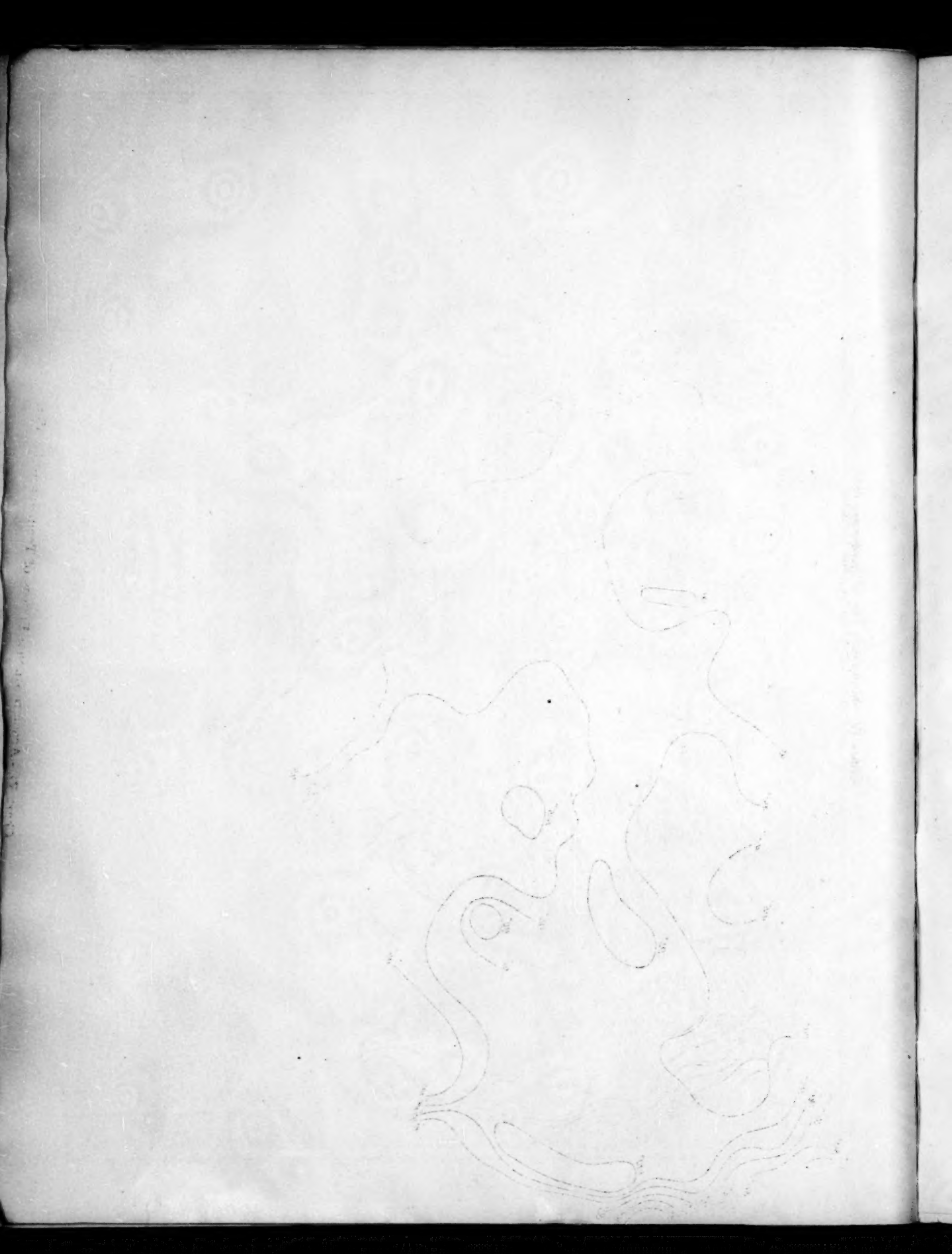


Chart IV.—Maximum Temperatures for 1893.





Weather Bureau.

MARK W. HARRINGTON, Chief.

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Chart VI.—Absolute Annual Ranges of Temperature for 1893.

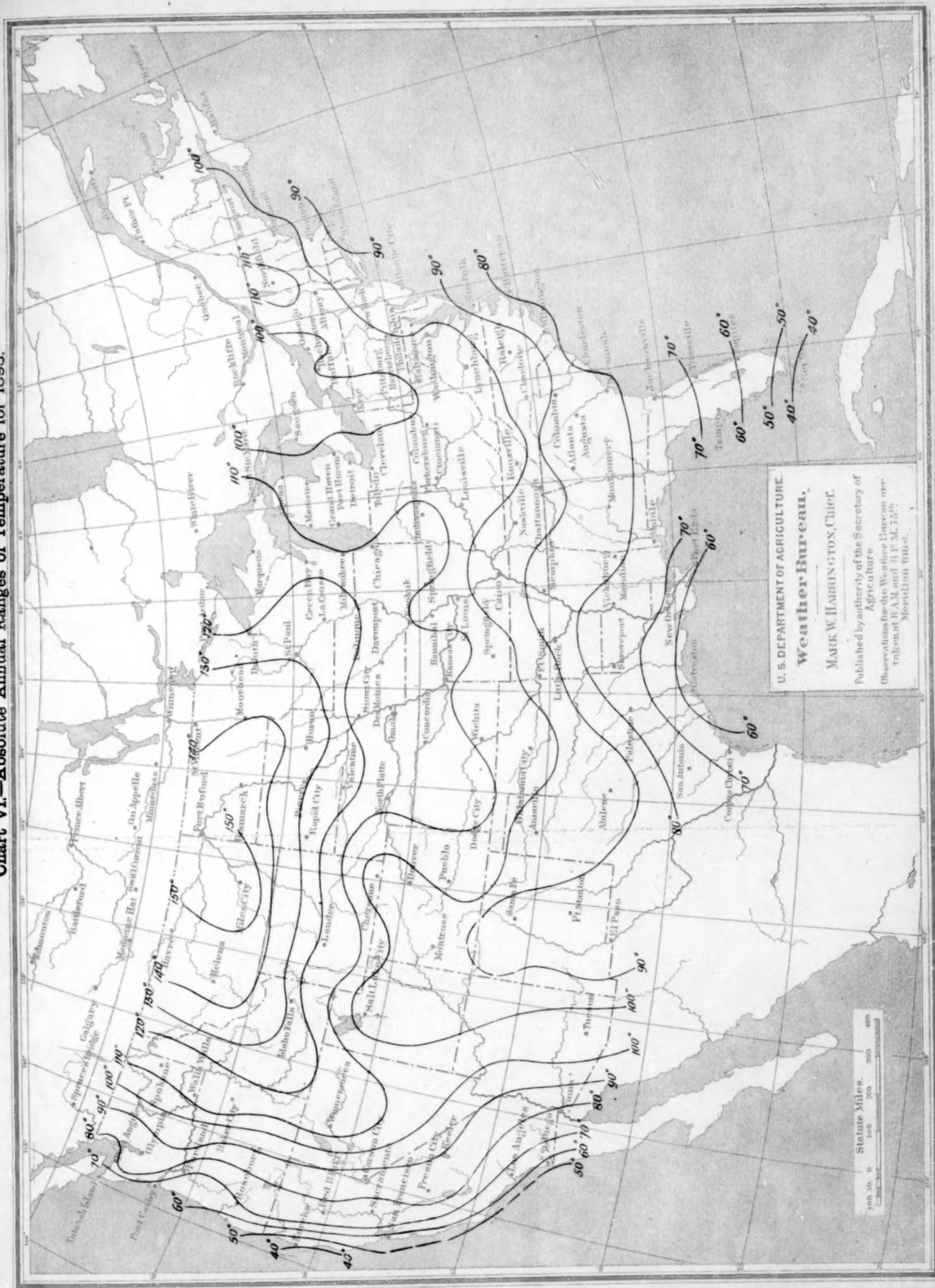


Chart VII.—Annual Precipitation for 1893.

